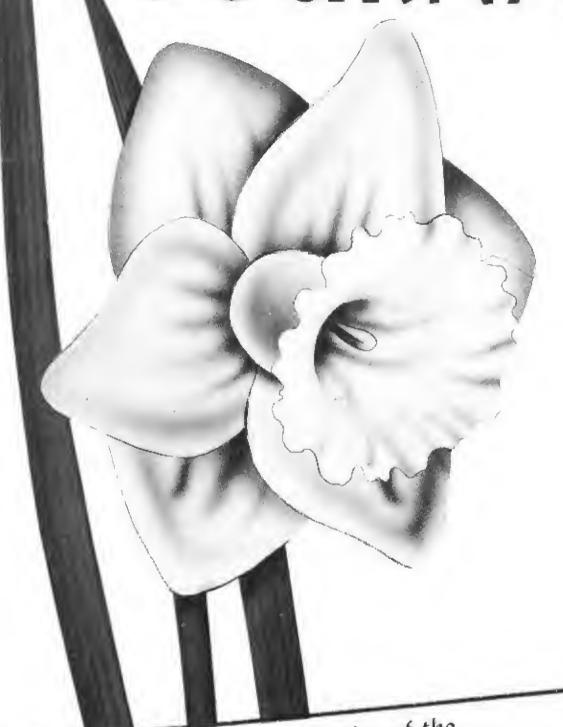
# THE DAFFODIL \ JOURNAL



Quarterly Publication of the AMERICAN DAFFODIL SOCIETY, Inc.

> SEPTEMBER 1965

# The DAFFODIL JOURNAL

Quarterly Publication of the American Daffodil Society, Inc.

Volume II

Number 1

#### SEPTEMBER, 1965

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Articles and photographs (glossy finish) on daffodil culture and related subjects are invited from members of the Society. Manuscripts should be typewritten double-spaced, and all material should be addressed to the Executive Editor.

DEADLINE FOR THE NEXT ISSUE WILL BE OCTOBER 15, 1965.

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Commercial Memberships are three times the foregoing amounts.

## ACCENT ON NOVELTIES-1965

By HARRY 1. TUGGLE, JR., Martinsville, Va.

One of the major satisfactions of daffodil culture is that no matter how trying the weather or other adversities, there is always some gorgeous bloom! Last year the major conversation topic was the severe freeze of Easter weekend, and 1965, not to be outdone, came up with another major freeze along the Atlantic seaboard about one week earlier. In consecutive years, after the early and much early midseason bloom was destroyed, flower quality and color has been outstanding. The bloom season actually began with N. triandrus concolor on Christmas day, under glass. Bloom was enjoyed up until the first day of May, when Frigid hit a rare cool spell, making it worth the effort to grow it for good bloom every third or fourth year.

Bill Pannill and I are back and forth in each other's plantings nearly every day in daffodil season, and with our difference in exposure and season, all types can be studied regardless of weather hardship. This spring much heartache was experienced over narrow perianths and stunted coronas resulting from an Elcide dip given last year (see DAFFODIL JOURNAL for June, 1965), but luckily the same varieties for the most part were not badly affected with both of us.

I had hoped this year to do an "in depth" treatment of a few particular types, but apparently covering the field in a limited way is more appreciated by those interested in novelty comment. Repetition from previous years is difficult to suppress, but it has been attempted. Readers are referred to last year's comment on many less recent introductions. It is reiterated that demand should be encouraged for those daffodils that will make good garden growers and subjects, as well as being capable of winning blue ribbons. Each year more varieties are being discarded that do not give consistently good bloom, or are weak

# OUR SECOND VOLUME OF THE JOURNAL

This issue begins Volume II of THE DAFFODIL JOURNAL, successor to the Bulletin. Under the plan creating the Journal, this number contains special annual articles, and the roster of members in the American Daffodil Society. This material formerly appeared in the Yearbook which was published for several years.

The Publications Committee and the Editors hope the format and enlarged contents of the Journal have been attractive, interesting and helpful to the membership. Suggestions are always welcome—and criticism too. The Editors always most cordially invite new authors and new subjects for publication. The Journal is your place of exchange for experience, ideas and information.

or tempermental growers. Also, unless one has unlimited planting area, many proven older varieties must be discarded when superceded. Cutting down on stocks of even the best is another necessity if proper attention is to be given to maintaining an optimum of good culture. When approximately five hundred clones are grown each year, and with a large turnover, any given variety must really produce to rate more than a single eight bulb row! Bulbs in surplus such as Shah, Ceylon, Ulster Prince, Binkie, Forty-niner and others are giving a gratifying account of themselves naturalized in the lawn.

The Roman Numerals heading the following commentary, with only a few exceptions, indicate Symposium Items.

I. The "greenish, lemon, lime, sulphur" tinted pale yellows continue to abound in favor, in the garden as well as in several shows which have wisely established special classes for this type 1a. New Moonshot is giving smooth bloom often with elusive tints of pink inside the trumpet; Up Front is also noteworthy. Inver remains the palest, icy tinted one. Windiammer is very smooth, heavy, and well saturated in greeny lemon tints. At the request of several show chairmen I have listed here those varieties (23) with which I am familiar that qualify for this type: Blenheim, Brimstone, Frontier, Grapefruit, Hunter's Moon, Inver, Lemon Fancy, Lemon Meringue, Limelight, Limone, Luna Moth, Maraval, Moon Goddess, Moongold, Moonmist, Moonrise, Moonshot, Moonstruck, Mulatto, Peking, Tintoretto, Up Front, and Windjammer. For fair competition, I would be inclined to include borderline cases such as Garron and Leinster. It should be stressed that a number of these easily reverse to 1d in warm sunny weather, and at that stage must be faulted when judged at shows.

II. Olympic Gold has been the finest new golden 1a bloomed here since Arctic Gold's debut 11 years ago. It improves upon and corrects every feature of Kingscourt: it is smooth, flat (no "hooding" or "cuping" of perianth), evenly colored, strong stemmed, and lasts. Arctic Gold, Viking, and Slieveboy complete the quartet of outstanding exhibition contenders. Carrickbeg, with its mixed ancestry, is requiring time to settle. The gold 1a's which personify the daffodil to the public at large are even more variable than colored cups in performance, and progress is notably slow.

III. Descanso was the highlight of the yellow trumpet 1b's this year. It is graceful in form and smooth in color and texture. Downpatrick is still preferred over Newcastle, which tends to color muddiness in the perianth and invariably "hoods." Prologue is clean, very early, and long lasting. "Rosedale" (by C. E. Radcliff, unfortunately not registered) has a tapered and rolled deep rose pink trumpet, and a good perianth. The color holds! "Rosedale", Alpine Glow (syn. of Radcliff's "Roslyn"),

and Rima make pink trumpets a pleasing reality. Several recent Radcliff pink 1b's settling here indicate that progress in this type is quite advanced "Down Under."

IV. Ulster Queen, on maiden bloom, promises to combine the best features of its illustrious parents, Empress of Ireland and Vigil. Queenscourt and Birthright are still not amiably settled. Vigil and Finola continue to be the most glistening white 1c's. Empress of Ireland astounds with its massive size, regal proportion, and durability. Longford, a broader petaled, graceful Cantatrice type, is regrettably very subject to basal rot. I have admired many superbly grown items at Mrs. S. S. Walker's here in Martinsville, but I am really envious of the blooms she had of White Prince this spring. I have never seen finer 1c blooms: of ideal proportion and over five inches across, with waxen smoothness, and on strong, tall stems, her White Prince would have elicited jealousy from anyone. I barely keep mine alive after a good start, so am going to start over again with new stock. (This is a worthwhile gamble on desirable items that is often successful). Predicated on its debut, Riber should be a fine garden subject. It has the necessary size, stem, plant and vigor.

V. Lo, these many years, Grant Mitsch has been keeping his ace 1d "in the hole"—Honeybird! On the basis of six blooms here this year, it was the finest 1d I have yet seen, closely followed by Lunar Sea. Honeybird has rounder form in all parts than Lunar Sea (many will think Lunar Sea more graceful), the strongest 1d stem, and superb pose. It should be the garden 1d as well as a top flight show flower. Later blooming 1d's are badly needed.

VI. Camelot sets a new high water mark for self yellow 2a's. Not trumpet, but true large cup in character, it has a very rounded, smooth, thick perianth, and a neat, even mouthed cup in beautiful proportion. It is a uniform clear yellow, not gold. Butterscotch blooms earlier and has a deeper gold color here than Galway, which it favors in form. Both these noteworthy novelties make fine plants. Sunlit Hours is valued for its early, large bloom and for its vigor. Ormeau and Galway are still fine flowers which now have competition. Jefferson-Brown's Breakthrough introduces a large, flat-cupped greenish-lemon into this class, and Murray Evans has a lemonade colored seedling that is valued at late midseason.

VII. The red cup 2a's are legion, and my wife claims they all "look alike." They do require careful study in many instances to note any distinction, and color largely depends on the season. However, a few stand out from the crowd. Matlock is without competition here as the garden standard bearer. With metallic-sheened, slightly reflexed, rounded segments, and a solid deep red cup of ideal exhibition balance,

Falstaff is the finest recently introduced red cup 2a grown here. Its inappreciably uptilted pose is another asset. Schapiro is tall, large, smooth, vigorous, and nicely colored. On first bloom it had one major fault—its name! Inferno is giving good bloom and can take strong sun. Zanzibar continues to give late, sizzling color, as does more star-shaped Firecracker. Air Marshal, Border Chief, Home Fires, Court Martial, Chemawa, Patagonia, and Vulcan generally give good color and reliable exhibition bloom.

VIII. Festivity continues to score highly, giving its best bloom when divided annually. The newer Joyous is immaculate in form and texture, fading out almost to 2c, as does My Love. Careysville must have missed being a 1b by microns. Its superb buffy yellow trumpet shaped cup had a narrow picotee edging of pink this year. With its smooth perianth and fine color it would be even more welcome as a 1b. Tudor Minstrel gave its first good bloom this year, evidentally benefiting from the Elcide dip which damaged many varieties. Abalone, as grown by Bill Pannill, is a large, smooth handsome garden subject, lacking sufficient contrast for show. Ariel, with more rounded form, is a better flower of Blarney's Daughter coloration. Prowess and Kinard are both distinctive with their flat cups; Greenore, Green Island, Statue and Tullyglass continue to please. Irish Minstrel has good contrast, form, and substance, but the perianth edges tend to cup inward. Wahkeena has the attributes of its sister Descanso, with better contrast. Like Careysville, its lovely tapered cup must measure at least 95 percent. New Song is the best of the strong buff or almost cheesecolored cups yet grown here, and Cream Cloud was smoother and heavier than its sister Oratorio.

IX. I have grown a number of the Kilworth x Arbar offspring, and collectively they are a fine lot of exhibition flowers. Several requests, and a few demands, have been received to select "the best." One member even suggested "select two or three, and drown the rest of the litter." I cannot concur with that attitude anymore than I would want only two or three of the even more numerous King of the North x Content progeny. Although the Kilworth x Arbar selections do have a strong family resemblance, they differ in form, season of bloom, size, and color. As with all red cups they will vary in color from season to season, and there is no uniformity in the length of time each variety has grown here in order to become fully acclimated.

If compelled to limit myself to three, strictly on the basis of performance here as exhibition material, they would be Avenger, Hotspur, and Don Carlos, all solid colored cups. The smallest and earliest blooming is Avenger, which has been a superbly colored, precision sculptured jewel for seven years. It perhaps has the heaviest sub-

stance. Hotspur has bloomed here for three seasons, is the largest, is smooth, and has a large saucer cup of fine color that is in good proportion. On first bloom this spring, Don Carlos had very fine features and deep orange coloring. Rameses, which results from a backcross, Kilworth x Rockall, on first bloom suggests it is definitely in the running for first place. In addition to the four aforementioned, I would not be without Norval, Victory, Anthea, and several others.

Wilson's Alicante still has the most sunfast orange red color and is therefore the best garden subject. Eve Robertson's No. 8-B continues to bloom along with the early sulfur trumpets and large cups. (Season 1-2) providing welcome color contrast. Sun-fastness is the greatest need in this group.

X. The two most exciting 2c's in '65 were Canisp and Pristine. Canisp is growing vigorously, and initial bloom in heavy waxen material portends form as fine as in its photos. Pristine, the stock of which Bill Pannill and I obtained in '61, is giving huge, smooth flowers of true large cup character on tall, strong stems. Its name is descriptive of its quality. We hope to arrange to have it introduced soon. Clareen was another waxen flower, a rounded or full Easter Moon type. Murray Evans' No C-138, from a pink line of breeding, was a fine upstanding, long lasting flower. Arctic Doric opens white and is proving valuable for very early bloom. Varieties when acclimated here often bloom at different periods than those described by their originators in other climates. Ardbane, Purity, Knockbane, and Whitehead are being tempermental, but the Elcide dip appears to have given the bulbs a shot in the arm. Templepatrick, an early, fine, smooth Zero type, unfortunately is subject to basal rot. Snowshill was neat but very small on first bloom—possibly a good parent for the minny addicts? Early Mist, Knowehead, Easter Moon, and Glendermott give superlative flowers and are the standards for judging newcomers. Zero and Ave when well grown continue to be fine material.

XI. The bloom on most 2d's suffered from the Elcide dip and the freeze this spring, but Daydream, Bethany, and Rushlight are still the top trio. A number of growers are having some basal rot trouble with the 2d's, and it is interesting that not one bad bulb was found in the Elcide treated stocks. When a proper or safer dosage and dipping time is found for Elcide it should control basal rot in many of the finer exhibition 2d's. Charter shows promise, and Pastorale was different with its light reflex and hint of pink inside the trumpet like cup.

XII. In comparison with most of the sub-divisions in the first four divisions (excepting 3d!) the 3a's constitute a wilderness. Ballysillan, Doubtful, and Perimeter are probably the best exhibition blooms, but all fade. We need a smooth flower with Jezebel's color, sun resistance,

and balance. Lemonade and Aircastle vie with each other as to which transmutes further into a jaundiced netherworld.

XIII. Carnmoon, Coloratura, Crepello, Greenmount, Noweta, and Syracuse are whites with only a narrow band or rim of sparkling tints of yellow. Each is charming and good for exhibition, or for gardens where the general effect is white. Green Hills continues to corner the market for amount of green in a flower its size; it is very late, large, tall, and strong. The flower, however, in the yellow rimmed 3b's that eclipses all others is Grant Mitsch's superlative new Silken Sails! Aptly named—of silken smoothness—it gave five-inch blooms on strong stems and lasted for over a week when temperatures were daily in the 80's. It was so impressive that I ordered more, a rare occasion in 23 years of daffodil addiction. Its pale lemon rim eventually fades out to white, but at its best it is a 3b. Merlin and Corofin capture the field of redrimmed 3b's, the stocks of older Corofin still not being sufficient for it to decline very rapidly in price. Audubon is one of the most exciting and distinct daffodils of recent years. It is round in form with a flat, cream white cup sharply edged with a narrow ribbon of bright rose or coral red that might be more pink in subsequent seasons. Merlin and Audubon are of such merit that it hardly seems fair for them to have to compete with either the solid colored or color not predominant 3b's!

XIV. Since Rockall, with its blue ribbon blooms and that fervent red cup, was introduced all others have become also-rans for show competition. Limerick, Enniskillen, Kingfisher, and Matapan remain outstanding exponents of the classical Barrii school. In three seasons Irish Splendor has completely failed to impress.

XV. With a reflex to a sparkling, broad white perianth, a cup abounding with green, and good strong stem, Angel's smart bloom rates a place among the Seraphim! Dream Castle, although classified 3c, measures 2c (40 percent) here. With substance and stem strength to spare, plus pleasing balance, it would rate even higher as a white large cup, for too many 2c's look like trumpets. Precision is not as white as hoped, but it is a larger, stronger, smoother Portrush type. Suilven retained a wire rim of yellow to its cup. Tranquil Morn is self white (no "gray" in center here) with a flat cup and reflexing perianth. It is vigorous, and altogether pleasing. Wings of Song gives the impression of two complete, overlapping triangles in its perianth, and coupled with a flat cup of good white makes another contender. It does not have the size of Tranquil Morn. The diminutive 3c's—Silver Princess, Shagreen, Cushendall, and Dallas—complete the season, Dallas setting the whiteness standard for other whites to emulate.

Bryher's sparkling white blooms with somewhat informal flair to

the inner segments are entrancing near the end of every season. Benediction is made of sturdier material, yet it doesn't grow as vigorously. Downhill is appropriately named, it has headed in that direction on two trials. Grant Mitsch has more 3c's from his famous Green Island x Chinese White cross. Numbers R33/52 and R33/44 are large 3c's that deserve names and introduction on basis of performance here. Murray Evans' D-192/1 (from a similar parentage to Wings of Song, but rounder in form than it) opens a scintillating white, has heavy substance, and lasts well in hot sun. By no means to be overlooked are Verona, with cream crown, and Tobernaveen, with deep green eye.

XVI. Doubles can no longer be relegated to stepchild status! The new ones are not of the feather duster or windblown type. Falaise has started the belle époch of doubles, and its offspring Gay Time is proving to be an even more potent parent. In white and purest red, Acropolis is immaculately dressed. Newer Monterrico is larger, well formed, and its inner segments are more orange red. Candida gives stylish bloom in white and cream, and Fiji is perhaps the most beautifully proportioned of the lot, in two complementary shades of yellow. Papua is another good one in two shades of yellow. Tonga and Hawaii are both well formed in a combination of yellow and scarlet. Gay Time, in cream and orange-red, should make an exemplary garden double, it is floriferous, vigorous, and deliciously scented. It produced some fertile pollen here this spring. Several Evans seedlings from Falaise x a seedling (Shirley Neale x Chinese White) were promising combinations in white and a richer yellow than that found in Double Event. . . . None of the *poeticus* type doubles has ever opened here, and it is hoped that Mitsch's new Sweet Music may finally be the one that will bloom in warmer climates.

XVII. The 5a's as a class have considerable distinction, but it is a rarity to find an individual 5a that is different. King's Sutton stands out as the smoothest yellow exhibition type, and Tresamble probably holds on as best show white. New Silver Bells is an interesting white that does have distinction—its large bell shaped cups appearing pleasing in balance. Honey Bells with its heavy substance, Lemon Drops, Yellow Warbler, and Merry Bells are good. Bicolors, earlier whites, and yellows with colored cups would be a welcome diversion.

XVIII. In sulphury tints, Sidhe has the flair and charm of much smaller Hawera and April Tears (both miniatures). New on the scene, Arish Mell gave three lovely stems with smooth, sparkling white florets. The lovely half-breed, Silver Chimes, has *finally* been reclassified as a *tazetta* hybrid.

XIX and XX. The F-2's, Titania and Kitten, are proving their merit, and Woodcock remains the handsomest solid gold 6a here. Satellite

blooms very early and has welcome color. Nothing really new bloomed here in '65, but reports have reached here that the Blanchards have a pink cup in the coffers. Grant Mitsch repeated the cross that produced Jenny and Dove Wings and has some fine flowers which bear a resemblance to them. An all-white, even if similar to Jenny, would be welcomed for trial where Jenny does not prove amenable.

XXI. Shah, Starfire, and Waterperry are still the high spots. Minus competition, all-white Alpine is a nice 7a.

XXII. The exciting Mitsch reverse bicolor 7b's, Dickcissel, Pipit, and Verdin bowed here in '65. Dickcissel is the deepest yellow and has a campernelle-style scalloped cup. Pipit has sharper contrast and a neat, trim cup that is not as flat. Verdin is later and more rounded in form than its two sisters. When Dickcissel was in bloom it was the first jonquil hybrid in which my wife ever took an interest. Bunting was an outstanding, neat red cupped 7b, while Suzy and Susan Pearson were not up to par. Pin Money is small, with neat orange cups. Nancegollan appeals in white with creamy cups; Snow Bunting has been discarded. Solid white Quick Step is valued for its late bloom, and for not only setting seed, but producing fertile pollen. Some of the bicolor, and I believe a white or two (?), selections from Mitsch's Binkie x jonquilla series would be welcomed. Pink cupped entries are sorely needed to replace Cherie, the stocks of which are riddled with virus.

XXIII. Nothing new in *tazetta* varieties, but an interesting experiment with potted bulbs of Matador in a cool greenhouse revealed that it will readily set seed under glass in a 50-70° temperature range. Nearly 1,300 seed were harvested from Matador x *cyclamineus*, *triandrus*, *jonquilla*, and Falstaff pollens. More on this in a later issue.

XXIV. Perdita has not yet settled here, but a good report on it was received from Ohio. Mitsch's new Quetzal should provide a needed fresh breath of air in this section.

XXV. The best pinks are still predominately 2b's, but good 1b's are here, and more pink 3b's are on the way. Caro Nome (3b) and Infatuation have similar cup color—gradations from clear pink on margins through ivory to green in center—but vary in shape. Both are most appealing and are playing a major role in breeding. The striking color portrait of Accent on the Mitsch catalog cover accurately depicts it at its best color stage. We have had it that color, and even when not as intense, it is always pink. It is a superb doer in every respect. Rose Royale has reliable show form, with flat glistening white perianth, and a more tapered and better colored crown on the order of Salmon Trout. It is a good grower, but slow of increase. Fintona, which is one of those rare, good early pinks has been temperamental lately—it resents being frozen. Radiation grows and produces lovely

bloom without constraint, and its offspring, Melody Lane, has similar form, but with lovely light lilac pink color. New Powder Pink has a deep powder pink trumpt shaped crown and flat milk white perianth. Roselight failed to display any pink in a generally good color year. Knightwick and Marietta were nice on first bloom, but were not in the running with the first six named. Best Wishes and Tarago Pink (Ronalds) are settling to this side of the equator and giving good bloom and color.

Carita is the most striking pink for garden use, if one is able to keep it from rotting. Mitsch's Magic Dawn is somewhat similar, but makes a much better bulb that is not subject to basal rot. It should be introduced. Caro Nome and Accent are both excellent garden subjects. Tall, strong-stemmed Precedent resembles a pink cupped larger scaled Green Island that holds up well in trying weather. Smiles has a round perianth and saucer cup in white except for a bright coral picotee rim. Rose Ribbon and Foray are excellent garden plants and cut flowers, while Portal is more flamboyant with even more substance. Mrs. Oscar Ronalds, Gay Mood, and Leonaine all provide good color.

And for dessert, Romance. On new plants in both gardens Romance had very rounded form, exceptionally heavy milk white petals, and a rounded cup of solid deep pink in the general color range of Accent. The color developed quickly and held until after the perianth was gone. It is a vigorous, fast grower, and it shows much promise.

## SYMPOSIUM TABULATION DELAYED

It is regretted that the 1965 Symposium tabulation cannot be published in this issue. As late as publication deadline (July 15) over a dozen reports necessary for a sound geographical picture (especially for garden varieties) have not been received. If these reports are received by October 1st, the complete tabulation will appear in our December issue of the Journal. If the needed reports are not received by that date, a tabulation for Exhibition only will appear in the December issue, and there will be no tabulation for garden varieties in 1965. Without reasonable geographical distribution of the reports, the results for garden usage would not be reliable.

—HARRY I. TUGGLE, JR., Chairman, Symposium Committee

# FROM THE PRESIDENT'S DESK

For the daffodil lover every season has its joys and its problems. As this is written in dry New England during mid-July, there is excitement as we dig the bulbs we have elected to move, and as we eagerly finger our gains. On the troublesome side, however, we are faced with finding homes, either in our garden or elsewhere, for our increase, and must continue to wage the never-ending battle with weeds.

\* \* \*

Our orders are all placed, and soon after the JOURNAL appears our new purchases will begin to arrive and find their garden resting places. We have been trying these last couple of years—because of lack of garden time as well as lack of garden space—to discard about as many varieties as we add to our collection; thus far we have not attained our goal. We are taking on about 30 new kinds, and so far have not found an equal number we can bear to part with.

\* \* \*

During the spring we were fortunate enough to attend eight shows, five of them outside New England. We visited two "Daffodil Days", at each of which a large audience was treated to an interesting, varied, and useful program. Our Northeast Regional Vice President, Mrs. Carrington, ably seconded by Mrs. Capen, sponsored a combination of talks, garden visits and sociability that attracted an appreciative group not only from northern New Jersey, where the meeting was held, but from quite distant points. The Wisters (experienced through several similar occasions in Philadelphia) were on hand to discuss established favorite varieties, while Dr. Weiss (all the way from South Carolina) spoke on culture.

A New England Daffodil Day was sponsored by Dr. Lees at the headquarters of the Massachusetts Horticultural Society in Boston. A one stem show was held and judged in the early forenoon, followed by several hours of program, and after an excellent lunch the group repaired to the exhibition hall, where discussions pointed up what the judges were looking for in making the different awards, and illustrated essentials of showmanship. It was the first meeting of its type in the area, and appeared to instill an impetus which we hope will lead to increased interest in growing and showing daffodils.

The general feeling was that these Daffodil Days would prove a most worthwhile undertaking in all of our nine regions.

\* \* \*

The fall Board meeting is set for Saturday, October 9, in Des Moines, Iowa, with headquarters at Johnny and Kay's Motel, a beautiful spot

near the edge of town and close to the airport. The afternoon before, there will be a trip through the famous Den Boer Crabapple Arboretum (which should then be in full fruit and fall color) followed by a picnic at the delightful home of the Throckmortons. Saturday is filled with business until late afternoon when "George" has invited us to pay him a visit, at which time he will answer any and all questions. Dinner at the motel will be followed by daffodil slides and good fellowship.

We know that all Board members will make every effort to attend. They, of course, will automatically receive reservation forms. This is a cordial invitation to those not on the Board to join us, for they will be most welcome, and at the Board meetings. These fall meetings have become increasingly enjoyable, affording as they do the chance to talk daffodils, meet many other active members and, on this occasion, visit an interesting midwestern city. Write to our secretary, who will be glad to send you detailed information and reservation forms. Will you join us?

\* \* \*

Like the rest of you, we are eagerly awaiting the appearance of this September Journal, particularly as it contains the symposiums and tips on new varieties. While as mentioned before, our bulbs are supposedly all ordered, some grower may still get a hurry-up request for some appetizing item that ranks high in the symposium or wins an enticing Martinsville encomium.

A happy planting season to all!

—JOHN R. LARUS

# CARE NEEDED IN SHOWING 'COLLAR' DAFFODILS

Exhibitors probably have noticed that the Classified List and International Register of Daffodil Names, issued by the Royal Horticultural Society in 1961, assigns the split cup or "collar" daffodils to Division XI. However, after making a further study of the matter, that Society's Narcissus and Tulip Committee now recommends that daffodils with the cup (corona) split to the base shall be the only ones of that kind to be exhibited in Division XI. Where the cup is not split to the base they shall be placed in the appropriate division as determined by the length of the "cup" (in view of their split condition they hardly deserve that name). It is suggested you make a note of this decision in your list immediately, so you won't forget it when you next exhibit in or judge a show.

# ROUND-UP OF 1965 HORTICULTURAL AWARDS

By ELEANOR R. BOLTON, Daffodil Show Reporter

Twenty-five reports from 16 states account for nearly 9,000 entries of daffodil horticultural specimens in the 1965 ADS-approved shows.

The Southwest Regional Daffodil Show at Little Rock, Ark., had 820 horticultural entries, the largest number reported. In second and third places were the Tennessee State Show at Memphis with 725 entries, and the National Capital Show held in Wheaton, Md., with 617.

William G. Pannill of Martisville, Va., exhibited in three shows and won ten ADS awards—the Gold Ribbon for Pristine (a 2c introduced in 1964 by Harry Tuggle and William G. Pannill), two Silver Ribbons, two Lavender Ribbons, three Purple Ribbons, and two Red-White-Blue Ribbons.

To Mrs. Goethe Link, Brooklyn, Ind., were awarded the Miniature Gold Ribbon, the Silver, Rose, Lavender, Maroon and Red-White-Blue ribbons and the Roberta C. Watrous Medal—all seven for exhibits in the Midwest Regional Show at Indianapolis.

Analyzing the Gold Ribbons winners gave no indication of a "trend." All were in Divisions I, II, and III with the exception of Jenny, a 6a exhibited by Mrs. Kirk Greiner at Biltmore, N. C.

A Summary of the ADS awards follows:

#### GOLD RIBBON (Best in Show)

| Mrs. Rufus Higginbotham   | Dallas, Tex.       | Spellbinder 1d       |
|---------------------------|--------------------|----------------------|
| William H. Roese          | La Habra, Calif.   | Prologue 1b          |
| C. K. Dorwin              | Santa Barbara, Cal | if. Cantatrice 1c    |
| Mrs. Thomas Dewart        | Greenwich, Conn.   | Birma 3a             |
| The Rev. J. B. Shannon    | Westport Point, M  | ass. Honeybird 1d    |
| Mr. and Mrs. C. D.        |                    |                      |
| Webster                   | Islip, N. Y.       | Honeybird 1d         |
| Mrs. Robert J. Taylor     | Atlanta, Ga.       | Peking 1a            |
| Mrs. Alfred Sams          | Macon, Ga.         | Beersheba 1c         |
| Mrs. William McVaugh, Jr. | Nashville, Ind.    | Crete 3b             |
| John M. Hayes             | Bowling Green, Ky. |                      |
|                           | В                  | larney's Daughter 2b |
| Mrs. Neil E. Strawser     | Bethesda, Md. Bl   | arney's Daughter 2b  |
| Mrs. Robert Gray          | Shelbyville, Ky.   | Sligo 2a             |
| William G. Pannill        | Martinsville, Va.  | Pristine 2c          |
| Mrs. Kirk Greiner         | Saluda, N. C.      | Jenny 6a             |
| Mrs. Alfred Hanenkrat     | Dayton, Ohio       | Tudor Minstrel 2b    |

| Mrs. Bert B. Boozeman   | Muskogee, Okla.    | Air Castle 3b |
|-------------------------|--------------------|---------------|
| Mrs. Charles A. Cornber | Norristown, Pa.    | Kingscourt 1a |
| Mrs. J. Pancoast Reath  | Wayne, Pa.         | Content 1b    |
| Mrs. A. M. Austin       | Memphis, Tenn.     | Day Dream 2d  |
| Mrs. Louise Fort Linton | Nashville, Tenn.   | Festivity 2b  |
| Mrs. Frank Harmon       | Dallas, Tex.       | Bethany 2d    |
| Mr. and Mrs. J. C.      |                    |               |
| Anderson                | Petersburg, Va.    | Ormeau 2a     |
| Mrs. Alfred B. Schad    | Richmond, Va.      | Matlock 2a    |
| Mrs. Nolan West         | Sardis, Miss.      | Daviot 2b     |
| Mrs. M. H. Meshew       | Russellville, Ark. | Not Reported  |

#### MINIATURE GOLD RIBBON (Best Miniature)

| Mrs. Jesse Cox             | Hot Springs, Ark.                       | Triandrus Albus 10 |
|----------------------------|---|--------------------|
| Mrs. Hugh Petersen, Jr.    | Greenwich, Conn.                        | Triandrus Albus 10 |
| Dr. Glenn Dooley           | Bowling Green, Ky.                      | Triandrus Albus 10 |
| William G. Pannill         | Martinsville, Va.                       | Triandrus Albus 10 |
| Les Hannibal               | Fair Oaks, Calif. Triandrus concolor 10 |                    |
| Mrs. Hugh Petersen, Jr.    | Greenwich, Conn.                        | N. calcicola 10    |
| Mrs. Mark D. Hodges        | Milledgeville, Ga.                      | Watieri 10         |
| Mrs. Goethe Link           | Brooklyn, Ind.                          | Stafford 7b        |
| Mrs. Francis E. Field      | Asheville, N. C.                        | Xit 3c             |
| Mrs. Alfred Hanenkrat      | Dayton, Ohio                            | Xit 3c             |
| George S. Lee, Jr.         | New Canaan, Conn.                       | N. Scaberulus 10   |
| Mrs. Merton S. Yerger, Jr. | Princess Anne, Md.                      | Hawera 5b          |
| Mrs. Neil E. Strawser      | Bethesda, Md.                           | Hiawassee 8        |
| Mrs. J. Pancoast Reath     | Wayne, Pa.                              | Pango 8            |
| Mrs. Louise Fort Linton    | Nashville, Tenn.                        | Cyclamineus 10     |
| Mrs. Henning Rountree, Jr. | Hampton, Va.                            | Canaliculatus 10   |

## SILVER RIBBON (Most Blue Ribbons in Horticulture)

Two exhibitors won the Silver Ribbon twice: William G. Pannill at Hampton, Va., and at Nashville, Tenn.; Mrs. Hugh Petersen, Jr. at both Greenwich and Hartford, Conn. Other winners were Mrs. Jesse Cox, Hot Springs, Ark.; Mrs. Frank Harmon, Dallas, Tex.; C. K. Dorwin, Santa Barbara, Calif.; William H. Roese, La Habra Heights, Calif., who, incidentally, had 13 winning entries in the La Canada show; Mrs. William S. Simms, Atlanta, Ga.; Mrs. Alfred Sams, Macon, Ga.; Mrs. Goethe Link, Brooklyn, Ind.; Dr. Glenn Dooley, Bowling Green, Ky.; Mrs. Charles Mayfield, Shelbyville, Ky.; Mrs. A. Gordon Brooks, Richmond, Va.; Mrs. Francis E. Field, Asheville, N. C.; Mrs. C. B. Scully, Islip, N. Y.; Mrs. Fred Schuster, Vandalia, O.; Mrs.

S. H. Keaton, Muskogee, Okla.; Mrs. Charles A. Gruber, Norristown, Pa.; Mrs. Norman Walter, Springfield, Pa.; Mrs. J. Pancoast Reath, Wayne, Pa.; Mrs. Charles McGee, Hughes, Ark.; and Mrs. Nolan West, Sardis, Miss.

#### ROSE RIBBON (Seedlings)

There were lamentably few exhibitors in this class. However, the Rose Ribbon was awarded to Mrs. O. L. Fellers, Eldorado, Ark.; to Mrs. Ken Anderson, LaCanada, Cal.; to Dan Thomson, Clemson, S. C.; to Mrs. Goethe Link, Brooklyn, Ind.; to Mrs. George D. Watrous, Jr., Washington, D. C., and to Mrs. Ben Robertson, Taylors, S. C.

#### WHITE RIBBON (Three Items, One Variety)

ADS winners in this category were C. K. Dorwin, Mrs. Hugh Petersen, Jr., Mrs. Robert Gray, Mrs. W. L. Wiley, Mr. and Mrs. C. D. Webster, Mrs. Ted Schwachhofer, Mrs. Theodore Wolcott, Mrs. John Bozievich, Miss Anne Sangree and Mrs. James H. Donahue, Jr.

# GREEN RIBBON (12 Varieties, one stem each, from at least four divisions)

There were seven reported winners in this competition—Mrs. Ken Anderson, Mrs. Hugh Petersen, Jr., Mrs. W. L. McCoy, Mrs. H. Daniel Finley, Mrs. Merton S. Yerger, Jr., Mrs. Theodore Wolcott, and Mrs. J. Pancoast Reath.

## LAVENDER RIBBON (Collection of Miniatures)

Top awards for their collections of wee daffodils were Carl Amason, Mrs. Michael Galluci, Mrs. Hugh Petersen, Jr., Mrs. Mark Hodges, Mrs. Goethe Link, Dr. Glenn Dooley, William G. Pannill, Mrs. Francis E. Field, Mrs. Alfred Hanenkrat, Mrs. J. Pancoast Reath, Mrs. Neil E. Strawser, Mrs. Nolan F. West, Mrs. T. G. Morehead and Mrs. P. R. Moore, Jr.

#### MAROON RIBBON (Five Varieties Reversed Bi-colors)

Recent introductions of many new varieties of reversed bi-colors have stimulated competition in this category. Winners this year were Mrs. Jesse Cox, William H. Roese, Mrs. William B. Weaver, Jr., Mrs. Goethe Link, Mrs. J. C. Lamb, Mrs. Robert Gray, Mrs. Charles McGee and Mrs. Louise Fort Linton.

#### PURPLE RIBBON (Collections)

Awards for collections went to Mrs. Clifford Thompson, William H. Roese, Mrs. Hugh Petersen, Jr., Mrs. Mark D. Hodges, Mrs. Alfred

Sams, William G. Pannill (3), Dr. Glenn Dooley, Mrs. Harry Wilkie and Mrs. Nolan F. West.

RED-WHITE-BLUE RIBBON (Five Varieties American Bred)

C. K. Dorwin, William H. Roese, Mrs. Hugh G. Petersen, Jr., Mrs. Alfred Sams, Mrs. Goethe Link, Mrs. Luther Wilson, William G. Pannill (2), Mrs. T. G. Morehead, Mrs. James J. Tracey, and Mrs. John Bozievich were the winners.

# ROBERTA C. WATROUS MEDAL (Collection 12 Varieties Miniatures)

Only three medals were awarded. They went to George S. Lee, Jr., Mrs. Goethe Link and Mrs. Fred Allen, Jr.

# CAREY E. QUINN MEDAL (24 Varieties from Five or More Divisions)

There were no consistent winners in this challenging class, the entries indicating a large assortment of varieties only a few of which were listed more than once. Those to whom this coveted medal was awarded were Mrs. Fred W. Harris, Mayflower, Ark.; Mrs. William S. Simms, Atlanta, Ga.; Mrs. A. Houston Thomas, Nashville, Ky.; Mrs. A. Gordon Brooks, Richmond, Va.; Mrs. Harry Wilkie, Bellbrook, Ohio; and Mrs. Robert B. Cartright, Nashville, Tenn.

#### BEST ARRANGEMENT

Winners for the best artistic arrangements featuring daffodils were Mrs. Dalton Robins, Mrs. Katherine Meier, Mrs. Howard Osborne, Mrs. E. J. Glick, Mrs. Linnie Shaw, Mrs. Rodney Radford, Mrs. Cromwell Murray, Mrs. E. J. Coates, Mrs. Jerry Maxa, Mrs. Harry D. Grace, Mrs. Charles Manning, Mrs. Swain E. Clark, Mrs. Lowell Boaz, Mrs. Norris Apperson, Mrs. Ben P. Denman and Mrs. Morris Keesee.

Special awards from local sponsors and patrons are too numerous to list. They offer real encouragement to both seasoned and new daffodil growers.

#### 1965 RHS CLASSIFIED LIST AVAILABLE

A supply of the 1965 RHS Classified List is in the hands of Mrs. William A. Bridges and can be furnished members of the ADS at \$1.75 per copy. Send orders to Mrs. Bridges at 10 Othoridge Road, Lutherville, Md. 21093, and be prepared for the 1966 show season.

# MINIATURE DAFFODILS-AN ENGLISH SOURCE

In the paragraphs below I quote portions of a letter that will be of interest to all members of the Society who want to continue growing the charming miniature daffodils which always seem to be in short supply.

**BROADLEIGH GARDENS** 

Broadleigh
Sampford Arundel
Wellington—Somerset
(England)
21st May, 1965

Dear Mr. Wheeler:

Many thanks for your letter of the 7th March and my sincere apologies for not replying before now.

I purchased Mr. Gray's daffodil business nearly a year ago and brought the bulbs over to plant on my land here in Somerset. They seem to have done very well in our soil here and I hope that the rate of reproduction will be, if anything, better than it was in Cornwall. I have not had a great experience in these miniature daffodils and have much to learn as we go along. Fortunately Mr. Gray is actively assisting me and is continuing to use his stocks for further hybridisation. I have an option on all his new varieties.

Most unfortunately our stocks of the newer varieties are small and it is very difficult to build them up quickly. I am very keen to build up an export trade to the U. S. A. but this supply problem is a snag. Furthermore, much extra work and expense is involved and I am afraid that I must charge an additional 25% over list price to cover these overheads. By next year I shall have much more experience of what is actually involved and will then be able to work in more closely with your good friends.

\* \* \*

Should any of your members be visiting the U. K. I would be delighted to see them, although there will be nothing to show but dry bulbs as far as daffodils are concerned. My garden, however, is quite nice should anyone be passing by.

Yours sincerely,

WALTER STAGG,

Director—Broadleigh Gardens

I am sure the members of the Society will be pleased to learn who now has the stocks of Mr. Gray's daffodils, and I am doubly sure they will join in wishing Mr. Stagg much success as he grows them.

-WILLIS H. WHEELER

# NEW MINIATURES AND THE 1965 SYMPOSIUM

By Helen C. Scorgie, Symposium Co-Chairman, Harvard, Mass.

Last year I spoke of the small, hooded daffodils. This year one of them makes the symposium list for the first time. It is only in recent years that Colleen Bawn has come out of a half-century retirement into the commercial lists. This dainty miniature is a selected clone of *N. alpestris*, collected and introduced by William Baylor Hartland. It was from Mr. Hartland, you may remember, that Guy Wilson received in his youth his first daffodils as a gift. Whether Colleen Bawn was among them I do not know, but it was one that he loved and grew for his own pleasure all his life. He spoke of it in one of his yearly articles in the RHS *Year Book* as a cherished old friend of his childhood. The hooding that in a larger daffodil looks sloppy and unkempt has, in this diminutive daffodil, an indescribable delicacy. To me, it suggests a small child wrapped in a shawl.

Proposed for inclusion in the list of miniatures is another selection from a species. This is Little Gem. It was introduced a few years ago by Mr. Gerritsen of "collar daffodil" fame. It is a pure yellow trumpet, a selection from N. minor. It blooms freely and is very early. Some years earlier, Mr. Gerritsen introduced the 1b, Little Beauty, which is already on the approved list.

Another daffodil proposed for the list is the very old 1c, Rockery Gem, of unknown pedigree. It was registered in 1930 by R. A. van de Schoot, Ltd.

The large-cups will soon welcome a tiny, golden flower which for some years has been entrancing all who see it. Morwenna is an exquisite small charmer, an ideal miniature. It was raised by R. O. Backhouse within a few years of his death. How did he come to produce it? I have never heard that he had any interest whatever in miniatures. It may be a sport from a standard daffodil. That he was not interested in small daffodils is evident as he did not register it and sold it to the Rev. Thomas Buncombe. Mr. Buncombe died three years later and Morwenna passed into the hands of Alec Gray, from whom Mr. and Mrs. Richard Darden obtained their bulb.

Another dainty gem about to enter the miniature ranks is the fragrant golden yellow Flyaway, 6a, registered by Mrs. George D. Watrous, Jr. A member of the Society describes it as "a perfect pet of a little one—a real addition to the division, distinct from all others." In 7b, Mrs. Watrous has two other small ones. Curlylocks is said to resemble Bobbysoxer. Wideawake is from the same cross.

Two other candidates for admission to the miniature list are Baby

Moon and Baby Star, both in 7b. The originator of these is Jack Gerritsen. They are hybrids of N. jonquilla minor. The former has three to five flowers to a stem and several stems to a bulb. It is a light yellow color, sweet-scented and late-flowering. Baby Star is smaller, later, and of a golden color.

The Miniature Symposium for 1965 produced these standings:

#### ITEM 1. Div. 1. Trumpet.

#### Exhibition:

- 1. Wee Bee
- 2. Tanagra
- 3. Colleen Bawn
- 4. Little Beauty

#### ITEM 2. Div. 2. Large Cup.

#### Exhibition:

- 1. Marionette
- 2. Goldsithney
- 3. Tweeny

#### Garden:

- 1. Little Beauty
- 2. Charles Warren
- 3. Wee Bee
- 4. W. P. Milner

#### Garden:

- 1. Goldsithney
- 2. Marionette
- 3. Picarillo
- 4. Mustard Seed

#### ITEM 3. Div. 5. Triandrus.

#### Exhibition:

- 1. April Tears
- 2. Hawera
- 3. Mary Plumstead
- 4. Sennocke

#### Garden:

- 1. Hawera
- 2. April Tears
- 3. Arctic Morn

#### ITEM 4. Div. 6. Cyclamineus.

#### Exhibition:

- 1. Snipe
- 2. Mite
- 3. Quince
- 4. Tête-á-Tête
- \_\_\_\_\_\_

#### Garden:

- 1. Mite
- 2. Quince
- 3. Tête-á-Tête
- 4. Snipe

#### ITEM 5. Div. 7. Jonquilla.

#### Exhibition:

- 1. Sundial
- 2. Sun Disc
- 3. Demure
- 4. Pixie
- ITEM 6. Div. 8. Tazetta.

#### Exhibition:

- 1. Cyclataz
- 2. Halingy

#### 1 C 1

3. Pango

#### Garden:

- 1. Bobbysoxer
- 2. Bebop
- 3. Sundial
- 4. Pixie

#### Garden:

- 1. Cyclataz
- 2. Pango

ITEM 7. Div. 10. Species and other wild forms. One flower to a stem.

Exhibition:

Garden:

1. N. rupicola

1. N. cyclamineus

2. N. cyclamineus

2. N. asturiensis

3. N. watieri

3. N. tenuior

ITEM 8. Div. 10. Species and other wild forms. More than one flower to a stem.

Exhibition:

Garden:

1. N. fernandesii

Too scattered

2. N. calcicola

to evaluate.

3. N. triandrus concolor

4. N. triandrus albus

ITEM 9. Div. 11. Miscellaneous.

Several of the reporters grow some of the Blanchard bulbocodium hybrids but there seems to be no agreement that any particular one stands out as superior to the rest.

ITEM 10. Divisions not included above.

Exhibition:

Garden:

1. Xit

1. Xit

## OTHERS WRITE ABOUT DAFFS

The lead article in the November, 1964, issue of The Garden Club of America *Bulletin* is an excellent treatment of the topic "Raising Exhibition Daffodils," by ADS New England Regional Vice President Mrs. Hugh Petersen. In three pages almost every stage of growing and showing daffodils is touched on, and many helpful tips are given, including a recommendation to join ADS.

Daffodils are a major interest in The Garden Club of Virginia, and its *Journal* frequently contains articles relating to them. The March-April, 1965, issue has several. Virginia E. Curran, daffodil test chairman, reports on "Newer Daffodil Show Varieties." ADS Editor Mrs. Howard B. Bloomer, Jr., writes on a subject on which she is an expert: "How to Prepare Daffodils for Transportation." There is also mention of the 17th century variety known as John Tradescant's Great Rose Daffodil and some of the complications accompanying the sending of bulbs of this variety from an English garden to Virginia. Last, but by no means least, there is a complimentary note on our own DAFFODIL JOURNAL.

The Spring, 1965, *Newsletter* of the Midwest Region included some pointers on "Winning Awards," by Mrs. Leon Killegrew, and an introduction to "Miniature Daffodils," by Wells Knierim.

## RARE BOOKS ADDED TO SOCIETY'S LIBRARY

By WELLS KNIERIM, ADS Librarian

Through the generosity of Pierce Timmis of West Wardsboro, Vt., two rare books have been added to the Society's library: Burbidge and Baker, *The Narcissus—Its History and Culture*, published in 1875, and Parkinson, *Paradisi in Sole—Paradisus Terrestris*, reprinted in 1904 from the edition of 1629.

The former has 91 pages of text covering the history, culture, diseases, species and variety descriptions of early daffodils, and 48 hand colored plates "which originally appeared in the *Gardeners' Chronicle* (1869) from the careful pen of J. G. Baker, Esq., F.L.S., of the Royal Herbarium, Kew, representing all the species at present in cultivation in this country."

The latter is a large volume of 612 pages, weighing seven pounds, and contains woodcuts of trees, fruits and flowers common to the English gardens in the beginning of the 17th century. Chapter IX covers narcissus and includes 41 pages with nine woodcuts showing 63 kinds of narcissus. The opening paragraph shows that some problems are eternal. "There hath beene great confusion among many of our moderne Writers of plants, in not distinguishing the manifold varieties of Daffodils; for every one almost, without consideration of kinde or forme, or other special note, giveth names so diversly one from another, that if any one shall receive from several places the Catalogues of their names (as I have had many) as they set them down, and compare the one Catalogue with the other, he shall scarce have three names in a dozen to agree together, one calling that by one name, which another calleth by another, that very few can tell what they meane."

The woodcuts are accompanied by interesting descriptions such as: "Narcissus Iuncifolius luteus vulgaris maior. The ordinary Iunquilia or Rush Daffodil. This ordinary Rush Daffodil hath foure or five long greene round leaves, like unto Rushes, whereof, it tooke the name: among these leaves riseth up the stalke, round and greene, a foote and a half high very often, bearing at the toppe three or foure flowers all yellow but much smaller than the last, and so is the cup also; the seede is small and blacke, inclosed in small cornered heads: the roote is blackish on the outside. The smell of the flower is very sweet in all these sorts of Rush Daffodils."

Both books are available to members who have a serious interest in them by writing to the Kingwood Center Librarian, Mansfield, Ohio 44903, where our library is maintained. Members are requested to handle and pack these volumes with great care due to their age and value.

Other books in our library available for loan are listed below:

American Society for Horticultural Science. The Care and Feeding of Garden Plants. 1954, 283 p.

Bourne, S. Eugene. The Book of the Daffodil. 1903. 112 p., illus. Bowles, E. A. A Handbook of Narcissus. 1934. 248 p.

Brumbach, William C. The Romance of Daffodils. 1959. 47 p.

Calvert, Albert F. Daffodil Growing for Pleasure and Profit. 1929. 412 p., illus.

Downey, Earl F. Improving Your Garden Through Soil Management. 1955. 250 p.

Headstrom, Richard. Garden Friends and Foes. 1954. 219 p.

Gray, Alec. Miniature Daffodils. 1955. 57 p.

Herbert, William, Amaryllidaceae. 1837. 428 p., colored plates. Nar. 316-319

International Commission for the Nomenclature of Cultivated Plants. International Code of Nomenclature for Cultivated Plants. 1958. 28 p.

Jacob, Joseph. Daffodils. 1910. 115 p., 8 colored plates.

Jefferson-Brown, M. J. Daffodils for Amateurs. 1952. 96 p., illus.

Jefferson-Brown, M. J. The Daffodil, Its History, Varieties and Cultivation. 1951. 264 p., illus.

Kellogg, Charles E. Our Garden Soils. 1952. 232 p.

Lawrence, Elizabeth. The Little Bulbs, A Tale of Two Gardens. 1957. 248 p.

Lawrence, W. J. C. Practical Plant Breeding. 1951. 166 p.

Meyer, Frederick G. Exploring For Wild Narcissus. Reprinted from the American Horticultural Magazine. 1961. pp. 210-220.

Moon, Owen. The Daffodil; An Anthology of the Daffodil in Poetry. 1949. 119 p.

Northwest Bulb Growers Association. Handbook on Bulb Growing and Forcing, for bulbous iris, Easter lilies, hyacinths, narcissus and tulips. 1957. 196 p.

Quinn, Carey E. Daffodils, Outdoors and In. 1959. 204 p., illus.

Royal Horticultural Society. Classified List and International Register of Daffodil Names. 1955, 1958, 1961 and 1965.

Royal Horticultural Society. The Daffodil and Tulip Year Book. 1914, 1933, 1935-1939, 1946-1965.

Weathers, John. The Bulb Book on Bulbous and Tuberous Plants for the open air, stove, and greenhouse. 1911. 471 p.

# GEORGE W. HEATH OF GLOUCESTER, VA.

By Franklin D. Seney, Newport News, Va.

On May 15, 1965 albus plenus odoratus opened its last flower on Back Creek, an estuary of the North River in Gloucester County, Va., and there came to a close the fortieth season of daffodil growing for one of the most enthusiastic growers of this flower in the country, George W. Heath. No one knows how many people have visited his display gardens and exihibits, or how many people have received pleasure from the cut varieties which he has shipped all over the country, but everyone knows that he has been for an extended period of time a potent force in the encouragement of the growth of daffodils.

George Heath came by his liking for daffodils naturally, since his father, attracted by the ease with which naturalized varieties grew there, had settled in the Gloucester area early in the century and had imported improved varieties from abroad to produce better cut flowers for the trade. The old variety Trumpet Major grows wild in the area and will take root if sown on top of the ground like grass seed. This was the variety which many years back was commonly sent to the city markets from the Gloucester area.

When the government imposed a quarantine on bulbs in 1926, the firm of M. Van Waveren & Sons investigated the possibility of growing daffodils on land belonging to Charles Heath, George's father. They found that the soil did grow exceptional daffodils, and they agreed to lease all 300 acres of Mr. Heath's land for the growing of their finest bulbs under quarantine and under scientifically controlled conditions to guard against nematodes. Several hundred acres were also leased from other individual owners. Dutch foremen were brought in to superintend the local workers, but they were unable to get along with the colored help, and it was then that George Heath came home from China, where he was working for the British-American Tobacco Company, to take over the enterprise. Thus was born an interest in daffodils which has lasted for four decades.

George was able to offer the proper incentives, and the bulb growing venture prospered under his direction. Just before World War II, the quarantine was lifted, and bulbs grown in Holland were once more available. Van Waveren withdrew, and the situation for flower growers in Gloucester County changed considerably in the face of renewed competition from abroad. However, the local people decided to carry on, and they have been successful to this day since their flowers are marketed during a springtime period when competition from other areas is lightest.

During the period with Van Waveren, George Heath held an annual

display of blooms which seedmen from all over the country came to view, in order to see what new and old things were available. One of the first amateur growers to see his flowers was Carey E. Quinn. This viewing of cut flowers and blooming plants still continues today, although the people who come to see the displays now are mostly amateur growers rather than professionals.

After the Dutch left, George formed an association with other people for the raising of cut flowers for market and began bringing in bulbs from Ireland and England, none of which were being retailed in this country at the time. It was his idea to raise the bulbs here for two years or more to acclimatize them and then make them available to amateur growers. He planted two or three acres of expensive bulbs before going away on a World War II Navy assignment. Upon his return he found the bulbs had so multiplied that he could start supplying fanciers with the newer and rarer bulbs.

Broughshane was one of the bulbs which attracted him, and he bought a bulb of it at \$100 when it was first introduced, offering bulbs after they had multiplied and settled down at \$10 each. At one time he raised 1,400 named varieties, and he was able to name at sight most of them. As a matter of fact, he did not depend upon sight alone, and his wife says that she has seen him inhale a daffodil's scent deeply to help in identifying its variety.

George Heath has been a close associate of many of the founders of the American Daffodil Society and was one of its earlier directors. He has also written articles for the American Horticultural Society, and he has shown a special interest in the growth and propagation of miniatures.

No mention of George Heath should overlook his attractive wife, Katharine, who handles the business details of their enterprise. About five years ago the two Heaths started what has now become a really magnificent planting of bulbs at their place in Gloucester, the Daffodil Mart. A few miles out of the town of Gloucester you come to a pleasant wayside, and then you turn down a country road until you reach their entrance. There on the right is a large clump of daffodils, and as you drive down their lane you see daffodils naturalized on either side. Soon you arrive at a grove of pine trees which have very high bare trunks and with foliage principally at the top. This type of planting appears to be a bit shady for daffodils, but the slanting rays of the sun must penetrate at different times of the day. This arrangement appears to be ideal because red cups retain their freshness longer, and all colors seem to be intensified.

Maintenance of this planting is no small thing, because, as each

variety of bulb is dug, the old soil is removed and carried away. Fresh soil is then brought in to fill the holes for the next planting.

Under the pine trees the Heaths each spring make a sawdust trail, spangled with the gold and other colors of daffodils. The sawdust is on the path where you walk, and as you follow it along, you see a fine collection of daffodils arranged in alphabetical order. There is also an open shed with cut flowers and pictures illustrating the various RHS divisions. Behind this building there is a planting of the very newest which the Heaths think should be called to the attention of the daffodil fanciers.

These are not all the horticultural treasures of this magic forest. Interspersed among the daffodils are other flowers which bloom along with them: single early tulips, hyacinths, *Tulipa fosteriana*, *Tulipa greigii*, scillas, chionodoxas, galanthus, alliums and anemones. The garden is a practical treatise on other bulbs which grow at the same time as the daffodils. The Heaths also grow daffodils in open rows in the fields. Both plantings are used for cutting their displays for flower shows which they have sent to many parts of the country. Their exhibits at the Garden Club of Gloucester and the Tidewater Virginia Flower Shows are always outstanding. They pick their flowers at prime and hold them over when necessary in wet storage in the icebox until showtime.

Fall is also a good time at the Heaths'. Gone then is the hurry of the blooming season, and time begins to stretch a little more as winter approaches. A visit to their daffodil barn during bulb planting time is a matter of pleasure and promise, for here are the stored up intricacies of future blooms from England, Ireland and the two coasts of the U.S.A., waiting for the proper culture to blossom forth into next year's prize flowers. This is the time when you can talk or think at leisure about the varieties which you will be getting a year or two later and the ones which have now come within your reach. The mellow grey timbers of the Heath's ancient barn, which was once owned by George Washington, afford a pleasant place for such contemplation.

George Heath has not only spread his enthusiasm for daffodils in many directions, but he has also published his own system of classifying daffodils. This is an extension or further breakdown of the present RHS listing which helps identify the color of varieties in addition to the shape and character of the flower. He has also published a list of relative blooming dates for daffodils and at various times his own ratings of the merits of the daffodils then in cultivation.

Mention must also be made of his other interest, the collection of shells. George Heath has acquired an authoritative knowledge of the culture and form of daffodils through the years, but he has also gone "shelling" during the winters when all his daffodils were planted. In the colder weather it is his custom to journey southward to hunt for shells. He has a very fine collection of matched shells at his home in Gloucester displayed in cabinets and table tops under glass. He is as well versed in this field as he is with narcissi.

He is no less generous with his knowledge concerning shells than he is with daffodils. During our recent visit to the Heaths, he "prescribed" for a suspected touch of nematodes in my daffodil plantings—the prescription was a heavy dose of kerosene applied to the soil—and he offered our two boys some very choice shells for their own collections. They, like myself, look upon George Heath as someone special, a real enthusiast whose interests have spread widely and who has helped to make known to us all the splendor of daffodils in the spring.

# SWEET PEPPER AND THE BULB FLY

By WILLIAM O. TICKNOR, Falls Church, Va.

Last summer I was given a bulb of Sweet Pepper, a lovely jonquil hybrid with a yellow perianth and red cup in 2 sizable florets. Since my wife and I have a particular fondness for jonquil hybrids, and had long admired Sweet Pepper, it was a much appreciated gift.

As I examined the bulb at planting time I noticed a softness about it. Further examination showed a hole near the base and I dug into the bulb with my knife, cutting away soft and rotting tissue. When I was through carving I had half of a bulb and an ugly fat grub the size of the last joint of my little finger. Reference to the U. S. Dept. of Agriculture Leaflet No. 444, *The Narcissus Bulb Fly*, indicated that it was a greater narcissus bulb fly larva. I executed the grub and surveyed my bulb remnant with dismay. Most of the top, half of the side, and half of the base was left, plus a small offset attached. I cleaned out the inside until I had all hard bulb tissue, washed it with alcohol, and planted it.

This Spring I was delighted to see it send up foliage and was amazed when a bud appeared. By late mid-April it was in flower with two lovely blooms. Nothing in the rich green foliage or the beautifully shaped flowers indicated that it had had a serious bout with a daffodil killer. The grub had missed the embryo flower and the bulb had survived the serious damage. My experiment will continue for another year to see if the excellent foliage can form a new, whole bulb and a bloom for next year.

# FLIGHT OF THE ROBINS

By Dr. GLENN DOOLEY, Bowling Green, Ky.

The Robins continue to move successfully even though the daffodil season is only a memory. Autumn is now with us and once more we will spring into activity. Action will be stimulated by the new orders of bulbs. When these arrive, there will be plantings made. This is also true with those varieties that were lifted and are now ready for replanting. The Round Robins will tell you about such activities as they are performed by members in various areas. Why not join and participate in a Robin? We need good members and a director or two.

Those of us living in the Southeast are wondering just what constitutes a good season. We certainly do not recommend the past one as ideal. The devastating cold sent the temperatures down far below what we like for good daffodil growing. The late varieties, however, came through to give us marvelous blooms and made us feel that daffodil growing was more than worthwhile. In the writer's garden Woodvale came through to give the most perfect flower grown. Swiss Miss is a new comer and it certainly proved itself with excellent form and texture. This variety held up well for over two weeks in the heat that prevailed at the time. This is something that is not always accomplished with many of the varieties grown. Perhaps more consideration should be given to hot weather daffodils.

Marie Bozievich of Bethesda, Md., reported that Merlin, a 3b, gave blooms that were clean and precise. For her Pontresina and Syracuse proved to be excellent. The reader will recall that Pontresina came from the same parentage that has given Coloratura and other lovely varieties. Hamzali was of a very delicate color.

\* \* \*

Perhaps our readers would like to know more about varieties that will withstand freezing and thawing. Elizabeth Rand of Garner, N. C., writes that Flowersong proved to be such a variety. She also reports that Gold Crown, Daviot, Personality, Dew-pond and Dunlewey also deserve much praise in view of their performance during the past season.

\* \* \*

Some members have discussed *N. canaliculatus*. Mrs. Taylor of Clarksville, Va., reported this variety bloomed beautifully for her three years ago but it is now a large clump of foliage. Dorothy and Marion Tuthill wrote that it usually blooms well for two years but rarely comes back after its second blooming period.

There is a wealth of material appearing in Men's Robin No. 1.

Some of these letters approach textbook material in content. It is not possible to give a complete report here. President Larus leads off by giving an excellent story of the convention at Pasadena. John does a lot of galloping around over the world, but he does manage to be at home at daffodil time. He lists his favorites in the intermediate and miniature varieties. These are Frosty Morn, Kidling, Lintic, Little Beauty, Samba, Stafford, Sundial, Tête-a-Tête, W. P. Milner and Xit. John, how can you be so cruel to leave out *N. triandrus concolor* and Pixie?

Dr. Tom Throckmorten of Des Moines, Iowa, gave us a rundown on the antics and capers of George. Do you know who George is? Just read the ADS literature. From the looks of the beautiful copy of the Daffodil Data Bank that has arrived, George has accomplished a marvelous piece of work. This bank gives the hybridizer much valuable material. Perhaps those of us not interested in this adventure would feel this data to be useless. Not at all; often the parentage of a new flower can be a guide to its worth. Green Island and Chinese White gave Coloratura. There are several other varieties appearing with this same parentage. The buyer knows at once that there is a treat in store by growing sister varieties. Again, the knowledge of the parentage will often tell something of the form and perfection of a new variety just coming on the market. If you do not have this data bank, get it.

\* \* \*

The membership of this robin is well diversified in that some live in a mild clime while others have to endure the cold. Halbert Cunningham of Crawford, Miss., doesn't like any weather below 40°. That is cold! At the other extreme, Pierce Timmis of West Wardsboro, Vt., would romp and play in much colder weather. Not all daffodils are adapted to the Vermont cold nor the Mississippi heat. Only in the robins do we learn of the many variables in daffodil growing. I think that most of us are envious of the Oregon climate. Murray Evans steps over bears, chases deer, goes fishing, cuts Christmas trees and grows daffodils. What a life! What a life!

\* \* \*

Murray gave something of a rundown on some of the new varieties that are being introduced by Grant Mitsch. He likes Audubon, which is a pure white with broad pointed petals and a cup rimmed with rosy pink to coral red. Coral Ribbon is a beautiful round and white 2b with a flattish, flaring cup bordered with a wide band of clear pink. This is among the best pinks he has seen. He mentions that Wings of Song and Silken Sails were very outstanding with their narrow lemon

rims. But he goes back to Paricutin for an eye-catching beauty. This flower is a spectular red cup. From his descriptions, its seedlings are something to behold.

\* \* \*

There is much discussion among these men about inducing members of the ADS and the general public to grow daffodils. Many of our low cost varieties are well worth growing and those with a small income should be encouraged to grow some of these. Once daffodil growing has started in a new garden, the desire for the newer and finer varieties will come. Let us all adopt the slogan—get a new daffodil garden started.

# FALL BLOOMING DAFFODILS ON MYKONOS

By Mrs. John M. Durbin, Wachapreague, Va.

Reprinted from the Washington (D. C.) Daffodil Society Newsletter, March 1964

"Aren't you sorry to go in the fall when there won't be any flowers in bloom?" a friend asked before we sailed in late September for Greece and a trip around the Mediterranean. No doubt that friend had daffodils on her mind for, as almost everyone knows, fall is a season of flowers in Mediterranean countries: carnations, roses, fuchsias, plumbago, jasmine, marigolds, orange and lemon trees—in parks, in gardens, for sale at street flower stalls, growing wild—in Greece, Italy, France, and Spain. Not all of them in every place, but enough and more to delight the eye and arouse the envy of any gardener.

In Greece on a trip to Sunium, hardy rose-red cyclamen were growing wild on the rocky hillside, much smaller, it is true, than those bought for a few cents a bunch on the street in Athens. At Delphi a profusion of sternbergia bloomed high on the cliffs above the ruins. Tiny colchicum peeped out from rock crevices in many places and the scent of rosemary or thyme underfoot was not unusual in the country.

For a daffodil enthusiast a fine surprise came in Mykonos. On a walk, which seemed to climb straight up a narrow rocky road, we took frequent rests: to count the tiny white churches, to look out to sea, even to pick a few tender young acanthus leaves to offer a baby donkey whose long head appeared over the rock wall, plainly asking to be petted. There in the ditch bloomed small cluster flowered white narcissus. In the almost perpendicular field over the wall were many more, growing in clumps among the rocks, weeds, and sparse grass.

Of course we picked a handful. Four, five, or six delicately fragrant flowers to the stem. At first we thought there were two slightly different kinds but the width of the red rim on the short cups proved to vary with the age of the flower; newly opened, the red was hardly noticeable. The stems varied from three to five inches. The time was late October, the fall rains just beginning. "Just a little wild flower" was all the information we got at our hotel, which was surrounded by a delightful garden.

The next day we saw the daffodils again in the rear yard of the museum, springing up all over, a trifle larger than those in the donkey field but far from pampered. The caretaker's English was limited and very careful. When I pointed to the narcissus and asked "name?" he answered in Greek, so we don't know whether he said the name or "Sorry, I don't know" or "How's that again?" We saw them nowhere else in Greece.

Was it *N. elegans or N. serotinus?* The latter is said to grow on many of the Greek Islands, while the geographical range of *N. elegans* is usually given as North Africa to South Italy. Our plant seems to fit descriptions and illustrations of *N. elegans*, however, and I lean toward that identification.

# EARLY DEATH OF FOLIAGE IS A DANGER SIGN

At times a plant, or a few daffodil plants, will develop brown leaf tips at or soon after flowering. Leaves of such plants usually die far ahead of the other daffodils in the garden.

While I have not taken time to examine the occasional plant so affected, it would be well for persons finding this trouble in their gardens to investigate it. To do so, carefully lift the bulb with soil and roots intact, and then wash away all the soil with a water spray. A normal plant should have clean white roots, with no discolored areas. If there are dead roots, or if some show darkened areas, it is possible the plant has been attacked by nematodes (not the bulb and stem nematode which attacks the bulbs and leaves, but possibly the "meadow nematode.").

If such root injury is found it would be well to submit the bulb with roots attached to the department of plant pathology of your state agricultural experiment station. If you do not have that address, write to the executive editor of the Journal, furnishing an addressed postal card for his reply.—W. H. W.

# NARCISSUS TRIANDUS LINNAEUS-A PROBLEM

By WILLIS H. WHEELER, Arlington, Va.

When the famed Swedish botanist Linnaeus (Karl von Linne) named and prepared the botanical description for the beautiful little narcissus known by the name in the title above, apparently he overlooked three of its stamens, hence the specific name of *triandrus*. The botanical description refers to the stamens as "sometimes exserted".

Those who have carefully examined the flowers of that narcissus probably will remember seeing three stamens protruding out of some of the blooms, beyond the rim of the cup. We can suppose Linnaeus, possibly in haste, may have overlooked the other three stamens situated well within the cup, their filaments being much shorter than those of the three exserted stamens.

However, that is not the only peculiarity of the species. Possibly some of our daffodil breeders who have been attempting to pollinate triandrus blooms have found no evident stigma in certain of the flowers. At least that has been my experience. In spite of its apparent absence, I could not believe it was really missing, so I took one such bloom and dissected it under a microscope. In doing so I found the missing stigma on a very short style which placed it at the point in the tube of the flower where the filaments of the stamens are attached. (See the illustration.) In such a position the stigma is of course out of reach



—Photo by W. H. Wheeler Narcissus triandus: Left, flower with recessed stigma, indicated by the pointer; right, flower with stigma protruding beyond the cup.

for a normal attempt at pollination by the plant breeder, but it is well situated for self-pollination.

To prevent self-pollination of the flowers of this kind, so they may be used as seed parents, the worker will need to carefully dissect the opening flower to remove the six anthers before pollen is shed. To do this, carefully slit the perianth, cup, and the side of the tube down to the base of the stamens, for removal of the unopened anthers. That will leave the stigma to receive whatever pollen you may wish to place on it.

This peculiarity of some of the triandrus blooms aroused my curiosity so I made a count of the flowers produced from twelve bulbs imported in the fall of 1964. They produced 21 flowers. Fourteen had stigmas protruding to the outer edge of the cup or beyond. Seven had the stigmas positioned at about the base of the anther filaments. There was no half-way positioning of the stigmas: If there were two or more flowers on a stem they were all of a kind, with either recessed or exserted stigmas. Both types were not on the same stem.

It would be interesting to know whether this is a variable character from year to year, or whether it is a fixed character of the individual bulb. I propose next year to attempt a separation of the bulbs at lifting time for a further study of this matter.

Do any JOURNAL readers have any comments on the problem of pollinating *N. triandrus?* If so, please let the Publications Committee have your story.

## HOW TO GET NAMES FOR NEW DAFFS

My six-year-old visitor was beginning to be bored as his grand-mother and I stopped to talk in front of nearly every clump of daffodils. To divert him I asked him to suggest a name for one of the seedlings blooming nearby, a cyclamineus-jonquilla cross. He looked at it an instant and said "Star-fly." That seemed very apt, so I indicated another, this one a cross between two forms of N. triandrus. "Star-bowl" was the prompt reply. Soon we came to a bloom from Mite x N. cyclamineus and I asked what he would call that. No delay at all, and "Star-nosecone" was named.—Robert C. Watrous.

## DAFFODIL HYBRIDIZING IN CALIFORNIA

By HELEN A. GRIER, Fullerton, Calif.

When one first thinks of new hybrids among the daffodils, it is with thoughts of cloudy skies, peaty soils, and the cool moist air of the British Isles. Anyone thinking of even trying to create new varieties in a climate such as that of Southern California is believed by the uninitiated to be a "bit off." One hears stories of the pollen drying to dust before it can be used, of the blooms drying to tinder before the fertilization can be completed, and the pods swelling to become empty bags, or at best filled with chaff to reward one's efforts. All are stories designed to discourage the beginner.

It was such men as Sidney B. Mitchell, Kenyon L. Reynolds (now Father Bede, OSB), Dr. S. Stillman Berry and Frank Reinelt, who, disbelieving such stories, proved that daffodil hybridizing in California was possible. They pointed the way with their successes so that we who follow may be guided to greater success. In the beginning a gardener was considered adventurous, foolish, or even God-defying if he attempted to hybridize flowers and vegetables.

Thirty years ago there were few cytology reports and chromosome counts available to help those interested in hybridizing daffodils. The trail was unmarked. This lack did not deter the adventurous from trying and later succeeding in producing lovely new varieties.

When one scans the recorded history of hybridizing in California, the noticeable lack of material pertaining to daffodils comes as an immediate surprise. Perhaps the dearth of material is due to the lack of interest in the varieties available at that time. The species, we know, did not attract the attention of the individual or hobby hybridist until quite recently. The species were thought to be too difficult even to attempt. In the days of slow transportation, the small bulbs were usually desiccated mummies by the time they had travelled the thousands of miles necessary to reach the West Coast. But, whatever the cause, the lack of a written account is conspicuous.

The 12-volume set of the works of Luther Burbank published in 1914-15 is almost devoid of mention of his own work with daffodils. In one instance only (in Vol. VIII) does he state that it is in the second and third generations from seed that the big advances are made. However, he does mention, on at least two occasions, the story of the two bankers in England who hybridized and whose stock was purchased by Peter Barr, and how, without labels, he was able to distinguish the separate stocks of these two gentlemen. One, being large and florid, tended toward the large and brilliantly colored in the daffodils he bred. The other banker was a small, shy, and quiet man and his flowers were like

himself, small, of delicate coloring, and with exceedingly fine form. This illustration was given in the books to show that the preferences of a breeder will often come out strongly. A breeder's stock, like an artist's paintings, can become known to the cognoscenti.

Not until the early 1920's, from the writings of Sidney B. Mitchell, does one learn of any work being done locally. Mr. Mitchell is well known for his work with iris, for his delightful books dealing with gardening in California, and for his years as dean of the Library School, University of California at Berkeley. Mr. Mitchell imported bulbs from the British Isles and Holland and was especially impressed with the work done by the Irish and English breeders. The hazards of importing at that time were such that bulbs had difficulty living at all, let alone blooming. Some varieties, mainly the whites, took several years to become acclimatized. Losses were heavy and the wait was long.

The bulb quarantine was enacted in 1927, and imports from abroad were limited to small lots of novelties. The prices of domestically raised stocks became so high that large plantings were almost prohibitive.

These conditions provided an incentive for "home-grown hybrids." When many bulbs were needed for home and garden display, the cheapest way to acquire them was to cross the best obtainable varieties and raise the seed, with the hope that the results would be satisfactory.

Results exceeded the expectations, and a new hobby was started. Mr. Mitchell was in contact with many other adventurous gardeners, the word spread, and he learned of others like himself, interested in the culture of daffodils from seed. Correspondence was sometimes spasmodic, but always full of interesting data which helped to boost the flagging spirits. Guy L. Wilson, whose bulbs entered only in small numbers due to the quarantine, continued to give encouragement via letters.

Mr. Mitchell's original stocks came from Mr. Wilson, P. D. Williams, and Ian Brodie (the Brodie of Brodie), who was a most meticulous breeder. From these original stocks Mr. Mitchell raised hundreds of seedlings, but nowhere in the RHS Classified List is one able to find mention of any registrations of his daffodils. Many of his iris, however, were named and widely circulated in commerce.

Mr. Mitchell stressed garden decoration in his breeding program, insisting that a variety have stamina, good color, and the ability to flourish in the garden with a minimum of care. He was most enchanted with the triandrus hybrids, and in Chapter 4 (Daffodils) of his book, From a Sunset Garden (1935), advises the use of the species N. calathinus (N. triandrus loiseleurii) in a program devoted to the production of triandrus hybrids. He describes it as being larger, more waxlike, scarcer, and more costly than N. triandrus albus, but the best variety for the breeding of triandrus hybrids.

Farther along in the chapter devoted to daffodils, he admonishes the breeders living in the warm climate to the south to work more with the tazettas, combining them with other larger forms. He warns of the patience necessary; it takes four to six or even seven years to flower a daffodil from seed.

Anecdotes are scattered throughout the pages of this book and make it delightful reading. It is a book that should be among the treasured works of one's collection.

While Mr. Mitchell in the East Bay area was working with his daffodils, Kenyon L. Reynolds and Dr. S. Stillman Berry were busy in the southern part of the state. Work was being done at the same time by Frank Reinelt (of delphinium and begonia fame) at Capitola, and by L. S. Hannibal in the north-central valley region. Each of these men was working under different conditions and each with varying degrees of success.

Kenyon L. Reynolds, a former resident of Pasadena and now Father Bede, OSB, of Benedictines of the Westminister Abbey in Mission City, B.C., became interested in daffodils. He and his wife, Patricia, journeyed to the daffodil farms in the British Isles, where they met such pioneers as P. D. Williams, J. Lionel Richardson, and Guy L. Wilson. From these growers the Reynolds obtained some of the newest varieties, and thus acquired good breeding stock with which to work. Returning home, they set about in earnest to develop varieties more suited to their own locality, with good color, form, and stamina. In due time a number of varieties were registered by Mr. Reynolds. The following varieties may be found in the RHS Classified List: Comanche 1a, Gay Dancer 3b, Jack-be-Nimble and Jack-be-Quick 6, Mariposa 2c, Montezuma 1a, Piute 6, Powder River 2a, Serene 3c, Shoshone 2c, Tehachapi 2c, and Temecula 2a. Some of these varieties are mentioned as being staged in a show held in Pasadena March 13 to 16, 1941. "Mr. and Mrs. Kenyon L. Reynolds exhibited a collection showing 74 named varieties and 86 seedlings." This show was reported in the Daffodil Year Book for 1942, issued jointly by The Royal Horticultural Society and The American Horticultural Society.

In the same article, Mrs. Harry J. Bauer is mentioned as being a winner in a class calling for "twelve varieties raised from seed by the exhibitor." In another article in the same *Year Book*, are mentioned Joseph Urmston, San Marino; Elliot Rogers, Santa Barbara; and Frank Reinelt, Capitola, as all being interested in the production of daffodil seedlings. Mr. Mitchell is cited as having good success with his seedlings.

Dr. Berry of Redlands was rather isolated in his region of hot summers and cool winters, and many of his early importations suffered badly. However, he persisted and like Mr. Mitchell was fascinated with the elfin quality of the smaller triandrus and cyclamineus varieties. He succeeded in raising and registering two varieties, Dancing Fairy 5a (N. triandrus albus x Bernardino) and Golden Chimes 6 (N. jonquilla x N. cyclamineus). These two varieties are pictured in conjunction with an article by Dr. Berry in this same  $Year\ Book$ .

Other publications containing notes on work with the species available two or more decades ago are the volumes of *Plant Life*, a publication of the American Plant Life Society. In the issue for April, 1945, are articles by Mrs. K. L. Reynolds and L. S. Hannibal. Mrs. Reynolds' account is "Daffodil Crosses Close to the Species," and Mr. Hannibal's article deals with tazettas.

Undoubtedly there were many other back-yard enthusiasts, who, working alone without recognition, contributed a clone or two of some garden hybrid among the tazettas to the vast number of variants which dot our landscape from here to the deep south. There are varieties or variants which today defy classification and are known only by colloquial names. One characteristic of the tazettas is that they require a warm dry region in which to seed. When one realizes that they are indigenous to the Mediterranean Basin it is understandable that they would prefer a climate like that of our southwest, where even open pollinations are possible, and thus give rise to garden hybrids which become known, perhaps, as "Aunt Mary's Narcissus."

# MORE WINNERS OF ADS MEDALS

The names of three ADS Medal winners were omitted from the summary in the last issue of The Daffodil Journal. We are happy to amend the list as follows:

The Carey E. Quinn Award, Silver Medal

1963, Carl R. Amason, El Dorado, Arkansas

1964, W. A. Bender, Chambersburg, Pa.

The Roberta C. Watrous Award, Silver Medal

1964, Wells Knierim, Cleveland, Ohio

# THE OREGON DAFFODILS-A PILGRIMAGE

By KEN DORWIN, Santa Barbara, and BILL ROESE, La Habra, Calif.

Every spring, for the past three years, we have made the trip 1,000 miles to the north to view the daffodils created by God and our good friends, Grant Mitsch and Murray Evans. Both of these hybridizers are masters in their field, Grant Mitsch for a much longer time, but much of their work is just coming to fruit. The first two trips we could not judge the flowers objectively, because of the blinding mass of new things we never had seen before. Here you can see all the latest introductions of every hybridizer in the world, and it takes more than one trip to become jaded enough to evaluate properly every conceivable form and variety of flower. The sight of such a spectacle on first viewing makes a daffodil fanatic want to get down and roll in them.

Neither of us is too interested in the small species crosses, so if our notes are rather slender on these, it is not because Mr. Mitsch does not have many, but rather our lack of interest.

We usually stay with the Evan's, as they have a lovely comfortable home with lots of room, known to us as The Daffodil Hilton. Imagine, if you can, a clearing of 20 acres in the midst of a Douglas fir forest, high in the foothills of the Cascades, with the ground sloping away 500 to 1,000 feet below on two sides; a pleasant farm house, a magnificant view of Mt. Hood and the surrounding countryside 30 miles east of Portland—that is The Daffodil Hilton.

There are several other Californians arriving or departing, and usually a fugitive from Martinsville, Va. We drop our bags, say hello hurriedly to everyone, and head for the daffodil fields. There is a crispness in the air here, even on a warm day, and you can sense the snow on the nearby mountains. The flowers here have a crispness found nowhere else, and in the early morning the ground is lightly frozen.

It was early midseason on daffodils at the Evans's but we were told Mr. Mitsch was at the height of his bloom. Each of us is mainly interested in the daffodils of the future rather than the daffodils we now possess, so usually we are dragged by someone to see some of the best of the latest seedlings to open. Then there are some old friends (too new for introduction) that we must see blooming for the second or third time.

This year we were fortunate in seeing the flowers of Mrs. Richardson, Mr. Dunlop, Allen Davis, and Mr. Mitsch at the National Convention, plus all our own flowers at the Descanso Show, just two weeks before traveling north. The weather was ideal in Oregon this year on April 1, with no rain during our entire stay.

We headed for the five-year-old seedlings first, and we found long rows of two crosses with especially good flowers. One was G-25 (Pink Lace x Interim) x Caro Nome. Bill Roese had stopped at the Mitsch's the day before, while Ken Dorwin had gone directly to the Evans's, so we had several flowers of Coral Ribbon which we promptly daubed on this cross, hoping to fall heir to some of the seed. Another was G-40 (Carolina x Rubra) x Otranto) x (Limerick x Bythinia), and what we crossed these flowers with we don't remember, because Murray Evans confiscated our stud files before we left, so he could keep his notes in order. However, we were well armed with pollen from the huge Richardson collection at the National Convention two weeks before, and anything we wanted from the Mitsch's. Another fine six-year-old seedling batch was F-268 (Zero x Katchenjunga) x Zero, containing very large white trumpet 1 C's and 2 C's. On these we crossed Empress of Ireland. White Prince, Early Mist and many other good whites.

Now to look at some of our old friends. There was a row of the 1b Descanso, affectionately known to us as "The Champ" because it was best flower of the show two years ago at Descanso, when Bill Roese first had a bulb of it. It is not as well contrasted as Newcastle, but it has a better stem and poise. Newcastle, at least in Oregon, has fallen over in the mud after a rain, while Descanso is standing tall and sturdy. Next to Descanso is "Champ's" sister, a 2b blooming four days later than its sister, while there's a two weeks difference in their blooming period in California. This flower is now named Wahkeena, and is being introduced this fall. The contrast between the white and yellow is a little better on Wahkeena, but the stem is an inch or two shorter. Bill Roese prefers Wahkeena because he thinks it is a better show flower, but Ken Dorwin prefers Descanso because it is more rugged and a better garden flower. Another old friend, a 2a Polindra x Playboy seedling now introduced as Space Age, was as robust and thick petaled as usual. It has a green yellow perianth and a darker cup of large size with a tall excellent stem and neck. This flower is a superb garden variety and makes an excellent bulb. For the areas where daffodils are hard to raise, this should be a natural. It has done exceedingly well in California for two years.

Among the smaller lots of clones too small for introduction was C-173, nicknamed Stovepipe, a 1b of excellent form, the trumpet is not flared. D174/2, a pink 2b that looks like a 1b with a soft straight cup and a lovely goffered white rim. F-280 is a 2b pink, after the style of Carita with a frilled white rim. Ken Dorwin's favorite pink is E-239/9, a 2b that looks like a trumpet with a narrow pink-lilac cup edged with copper. Its parents were Siam x Radiation. There was a

nice row of a pink we had seen the past two years, known now as Dwarf Pink No. 1, but this year the buds had not opened yet. It is a short bright pink with reflexing petals, certainly different from anything else in the pink class.

In the reverse bicolors, his best is 266/2 a 2d with light yellow petals. Murray says it takes only two hours to reverse the color of its cup after opening.

Mr. Evans has been working on doubles for a number of years, and he has 39 selections he is growing into stock. There were ten in bloom while we were there, and the most interesting were three selections from Falaise x (Duke of Windsor x Lady Kesteven, F-313. We liked F313/2 the best because it has beautifully rounded very white Green Island-like outer petals, with orange inner petals. Bill Pannill says it is better than Acropolis.

By this time we had spent more than a day with the Evans's and, more important, we had run out of pollen, so we climbed into the car and headed for the Mitsch's, 40 miles away. On the trip you wander through the foothills for ten miles, drop down to the Sandy River, and then go across the rolling Willamette Valley through beautiful farm land for 30 miles until you come to the tidy, white, trimmed-with-green farmhouse and office of Grant Mitsch.

It is just impossible to see and admire everything at the Mitsch's in two days, so we hurriedly passed the long rows of Flamingo, Accent, Daydream, etc., and concentrated on the selected seedlings and new crosses coming into flower for the first time.

From a cross of Galway x Kingscourt there are three nice seedlings: S9/3 the tallest, was overshadowed by S9/4 which has slightly better form. Mr. Mitsch considers S9/5 the best garden flower. All three are uniform deep yellow 1a's with the best attributes of both parents: fine substance and texture.

There were two outstanding white trumpets: W3/1 (Mt. Jefferson x M59/12) was a large icy white with much substance; the other, Mt. Jefferson x (Katchenjunga x Zero), was a huge very white 1c of excellent form.

In the reverse bicolor trumpets P5/13 (Lunar Sea x Y40/1) was the most outstanding we saw. It opens and reverses about the same time. The form is faultless and a contrast of color unseen in this class up to now. Another exceptional seedling was Lunar Sea x New-Era. This was lighter in color but equally good in form.

In the 2b's, Cream Cloud, being introduced this year, was large and perfect with hardly a faulted flower in a 40-foot row.

There was also a small stock of a Kilworth x Signal Light seedling that was every bit as good, or better, than the Kilworth x Arbar family.

Perhaps the smoothest flower we saw was in the five-year-olds—Pigeon x Empress of Ireland. Not pure white—a milk white—but a beautiful smooth 2c. Another five-year-old 2c, Knowhead x Empress of Ireland, we both liked—pure white and very large.

In the 2d's there were so many good ones we were at a loss to make up our minds, and our notes are a blank.

R-33/60 was a 3c from Green Island x Chinese White, which was a much improved Chinese White with almost no neck on a tall strong stem, and just a trace of color in the cup.

In the jonquil seedlings, the Aircastle x Jonquilla cross brought jonquil flowers with the form and color of Aircastle, a beautiful combination. Flicker (Q60/12) a red-cupped jonquil, is being introduced this year. There were also all kinds of reversed bicolor jonquils, the two being introduced this year are Pipit and Verdin. Do you like pink cupped jonquils? He has these too.

Now the pinks! One can't appreciate pinks until you have seen them at Grant's, for there are thousands of them. For instance, there are 25,000 seedlings of the Green Island x Accent cross, from two year olds on up. Two outstanding introductions this year are Audubon (Interim x Mabel Taylor) x Caro Nome, and Coral Ribbon, a sister seedling. Audubon has a rimmed cup of tomato red and is an outstanding flower in other respects, tall and good form. Coral Ribbon is less brilliant in color, but has beautiful form and is a good breeding flower. It is a better show flower than Accent.

Last year we saw what we considered to be the best pink at Daffodil Haven, Z-20/1 (Green Island x Accent) and it was equally good this year. It is outstanding in its substance and form.

Trumpet in character, but not in measurement, were V-36 (Radiation x Dawnglow), and V-37 (Radiation x Flamingo), both with excellent substance, the latter being deeper in color. R-49 (Mabel Taylor x Caro Nome), was a tall flower with nice form. The flaring cup was tipped with a salmon rim.

The largest splash of color in the pink seedlings was V-38/1 and you could see it for miles. This is a big flower, less than perfect in form, but what it lacks in form it compensates for in color. Its large flaring cup is best described as a bright ripe watermelon. Grant doesn't show you this flower, you just look and say WOW!

Of course, on your trips up and down the rows, Amy Mitsch is busy hauling homemade doughnuts and coffee from the kitchen to keep you going, for there just isn't time to sit down and eat.

Now the sun is going down at the Mitsch's so we better get back to a very late dinner at the Evans's. Armed with three huge bunches of flowers, two for pollen, and one just to admire, we head back to the

# HYBRIDIZERS' FORUM

Mendel Garden at New York World's Fair

The New York Times for June 21 reported the dedication of "The Father Mendel Garden of Heredity" at the Vatican Pavillion in the World's Fair. The garden commemorates the publication of Gregor Mendel's first paper on the laws of heredity 100 years ago. This paper was published in an obscure publication and was almost unnoticed until 1900. One wonders whether daffodil history would have taken a different course if Edward Leeds and William Backhouse had read this paper in their early years of daffodil breeding. It seems doubtful, as even now the long period from seed to blooming age, and the complications due to heteroploidy, discourage attempts to fit daffodils into the classic patterns of Mendelian inheritance.

Exhibits in the Mendel Garden are viewed from an elevated platform. They include plantings of red and white flowers to illustrate "The Case of Elusive Color," yew trees to illustrate "The Case of the Missing Midget," and smooth and wrinkled peas to explain "The Case of the Vanishing Wrinkles."

# Imperfect Seed

Commenting on a seed capsule containing only two white seed and a number of withered ovules, Dr. William L. Brown writes:

"I have just had a look at the seed capsule from Wanda which you sent to me recently." (Wanda, an unregistered 6a, thought to be a

Daffodil Hilton. While someone is putting the dinner on the table we stage the flowers all over the house to discuss at dinner and after.

Murray Evans tells us that after visiting the Mitsch's he wants to come home and plow up his daffodils and start all over. It is true that what one can see at the Mitsch's in one day is almost impossible to keep in the mind's eye, and how Grant can keep all his seedlings separated is beyond us.

The next day is spent daubing pollen on every flower we can find at the Evans's, and in general trying to keep our stud books straight, so that Murray will not have too much trouble trying to unravel our crosses in June when he is picking seed.

This is our yearly trip to Oregon. We would not miss it for anything, and if it is interesting to the membership, we will continue to report to the ADS.

tetraploid, had been pollinated with pollen from N. jonquilla.)

"In this capsule there were two ovules which were much larger than the rest. Each of these contained a partially developed embryo but the endosperm was completely lacking. This suggests that fertilization of these two ovules had occurred but the endosperm either failed to develop or aborted at an early stage. Endosperm failure is not unusual among some polyploids, forms with unbalanced chromosome numbers, and certain 'self incompatible' species.

"It has been demonstrated in several species (but not in daffodils) that embryos such as that mentioned above can be salvaged by excising them at an early stage of development and growing them out in artificial culture medium."

# Seed to Spare

One of the pleasant duties of the Breeding and Selection Committee is to bring together people who have daffodil seed to spare and people who would like daffodil seed to plant. In past years we have been able to supply seed to several would-be planters whose own seed crops were disappointing. Once more we can offer seeds to members who will give them good homes. Write promptly to me at 5031 Reno Road, Washington, D. C. 20008, giving some idea of the quantity of seed desired (25? 50? 100? more?). Next summer it may be possible to offer both seed and seedling bulbs two or three years old. Let us know if you would be interested, so that arrangements can be made in time.

While our committee has been distributing seed on a limited national basis two members have, independently, been sending quantities of seed of promising crosses to correspondents in Japan and Russia. We think the recipients will have some very agreeable surprises when these seed begin to bloom.

—ROBERTA C. WATROUS

# GROWING THE LITTLE DAFFODILS

By MRS. W. O. SHEETS, Reidsville, N. C.

The lively interest now being shown in miniature daffodils pleases me no end, for I've grown and loved the wee ones since I became seriously addicted to daffodils about 12 years ago. Before that time I had grown what was available in general nursery catalogues, but with my introduction to Alec Gray, and Mrs. Pratt of Little England Daffodil Farm, a whole new world of small daffodils opened up for me.

I have tried them all—miniature, maybe miniature, and the so-called intermediates—mostly from Divisions V, VI, and VII. Among these are the most beautiful and charming of all daffodils. I am not too concerned about how tall a variety grows for me, if it looks at home with the small ones. Of course there must be defined rules as to what constitutes a miniature for exhibition purposes. (So far even that question doesn't seem to be settled!) In my own garden I can mix what I like, and I do like the more robust hybrids for their dependability among the sometimes delicate little species.

The small daffodils do not fit well in garden rows or formal beds; neither do they mix happily in perennial borders or man-made rock gardens. Even in front of shrubs or hedges they are apt to be crowded out or starved. After trying them in many places, I've found only two pleasing ways of displaying the little bulbs.

My best plantings of little daffodils are along a path leading to the wooded part of the garden. There is morning shade in summer but full sun in winter. Long narrow beds were dug on each side of the winding path, and the little daffodils were spaced far enough apart to keep varieties separated. A planting chart was made and is kept up to date when changes are made or new ones added.

I try to renew the small labels before bloom season for the convenience of visitors, though they add nothing to the effect of naturalness that I like. In these border-beds I grow about 125 varieties, from tiny Mite to Bartley, from N. triandrus albus to Tresamble, the baby sizes growing snugly in the protecting shadow of their big brothers. The soil was heavy clay, so a great deal of humus had to be added and is being added every year as the pine-needle mulch breaks down. I feed these small daffodils lightly when the standard-size beds get their topdressing of superphosphate in the fall. In richer soil I should add nothing more than a bit of rotted compost once a year. All the varieties get the same treatment, for it would be impossible to give individual attention to each clump. So some have not been happy, and I expected some losses. On the whole, however, they have done surprisingly well, considering that they came from England, Ireland, Holland, Oregon and Virginia—

not to mention the old ones from Mississsippi, Georgia, South Carolina and Alabama. I plant them according to size of bulbs and hope for the best! No doubt many need to be deeper or less deep (here they must be deep enough for the squirrels to overlook them and for protection from the summer heat). I do not plant in baskets or pots for if they are happy they are not disturbed until they grow too thick to bloom well.

All bulbs look better with a green background, to my way of thinking, and the miniatures are no exception. But great care must be used in selecting companion plants or the tiny bulbs will be smothered, along with the blooms. Shrubs are planted well back of my bulbs for protection as well as color. Nandina, abelia, Camellia sasangua, lonicera, pyracantha, and eleagnus are all evergreen but open enough to allow air circulation, and can be kept pruned to desired height. Careless feet of man and dog are kept on the path by the shrubs, and among the daffodils some other choice small bulbs and perennials are grown. Chionodoxa sardensis is a must as all blues are lovely with daffodils, so are early scillas. Iris reticulata comes into bloom in late February with Jana, the first yellow daffodil to open. Snowdrops are here, for they sometimes open in January, heralding the season along with the hoop-petticoat, N. bulbocodium romieuxii. Two daffodils can be depended on to bloom in the fall here, the earliest hoop-petticoat, N. bulbocodium monophyllus foliosus (now listed as N. cantabricus cantabricus foliosus) and the green jonquil; N. viridiflorus.

I like some fall crocuses there too, for they add so much cheer at bulb planting time. One of the finest bulbs to mix with small daffodils is the hardy Cyclamen neapolitanum. When other bulbs are dormant it sends up adorable pink blooms, followed by beautiful marbled foliage that stays crisp and fresh all fall and winter, then just as daffodils come into bloom it quietly fades out of the picture until August comes again. Violets are another favorite companion for small bulbs, but seedlings do have to be pulled away from the tiny bulbs every year. Polemonium reptans open its blue airy blooms among the white and yellow daffodils. Iberis and hellebore are at the back of the beds to face down the shrubs and mingle with the taller daffodils. A few plants of Phlox divaricata are allowed to add another grace note of blue, but this too is a rampant grower that must be curbed. At the shadier end of the path the little Iris cristata grows happily with her foreign friends, and the old blue and white Roman hyacinths come back year after year to fill the most difficult dry spots. I tried the large Dutch crocuses with miniature bulbs and though the purple color and height were right, the scale was wrong. Too, the rabbits love crocus foliage in spring and kept them nibbled to the ground, buds and all.

The other way of growing the miniature bulbs that has proved

satisfactory is along the flagstone walks that separate beds in the garden. Here they are in full sun and mixed with sun-loving rock plants. These companion plants are prone to take over the whole show and eternal vigilance is the price I have to pay for the joy they give. But when was gardening ever an easy hobby? Nothing worth growing is entirely carefree, I've found.

Along the sunny garden walks the earliest of the little bulbs are enjoyed most as they are the first thing to bloom. The pale blue starflower, Brodiaea uniflora, is a perfect foil for the gold of March Sunshine, a cyclamineus hybrid that is earlier here than February Gold. Evergreen foliage of armeria, veronica, Phlox subulata, candytuft, alyssum, Tunica saxifraga, dianthus, and silene set them off like jewels. I tried growing small daffodils with a ground cover instead of a mulch, but found that almost everything was too tall to let the blooms show above. Ivy and euonymus were handsome and lush-and completely hid the six-inchers! Even Phlox subulata and Silene schafta reached above the smaller ones. Thymus serpyllum was flat and beautiful the first year, then it began to bunch up and take over beds, bulbs, and stone walk. About the only plants that I would recommend as ground cover for miniature daffodils are the ajugas and Mazus reptans. The ajugas are too tall when they bloom with daffodils only three or four inches tall, but the spikes can easily be snipped off and done away with, leaving the handsome flat foliage all year. The dainty Mazus reptans is perfect in scale with the tiniest of daffodils. One other ground cover has this happy trait but must be grown in acid shade—the partridgeberry, Mitchella repens.

Of course if you are lucky enough to have a stone or rock wall the ideal spot for miniatures is nestled at the foot of it in casual clumps. A lacy green vine on the wall adds to the effect, but gray boulders were made to show off daffodils, you know.

CORRECTION: In the JOURNAL for June, 1965, Vol. I, No. 4, on page 26, first line of the second paragraph, add "percent" after the word "two". The writer regrets the error.

# A DO-IT-YOURSELF RECIPE FOR COOKING DAFFODILS

By STAN BAIRD, Arcata, Calif.

Perhaps no calamity haunts the serious daffodil fancier more than the prospect of having his beds infested with *Ditylenchus dipsaci*, more commonly known as bulb and stem nematodes. Most daffodil fanciers know that this nasty little pest is a microscopic worm which multiplies with appalling rapidity and is not easy to eradicate once introduced into your garden. Unfortunately, nematodes can be present in a perfectly healthy looking dormant bulb. Only when the bulb produces foliage the following spring can the layman detect symptoms of the presence of nematodes (small, yellowish bumps on the leaves).

Last fall, plagued by the possibility of unwittingly introducing nematodes into my garden via the new bulbs I had ordered, I consulted several experts, including Grant Mitsch, regarding the possibility of some treatment of dormant bulbs other than the hot-water treatment used by commercial growers. No one knew of any chemical treatment which could be relied upon to kill all nematodes in a dormant bulb. Knowing that eradication of nematodes from my garden would involve the digging up of all plants and laboriously sterilizing the soil with a nematocide, I determined to attempt the hot-water treatment.

Consulting several plant pathology books, I found that some recommend cooking the bulbs for three hours and others recommended four hours. Also, some stated that the water must be held at 110°, but Grant Mitsch keeps the water temperature between 110° and 112° with no serious ill effects. Others recommended that the bulbs first be soaked in water at room temperature for an hour or two.

I decided to play it safe and experiment with some of my less expensive bulbs by soaking them first for an hour in water at room temperature and than for four hours in water held between 110° and 112°.

The first problem was to find a reliable and accurately calibrated thermometer. I ended up using two thermometers, one a relatively inexpensive brand from the local hardware store and the other a laboratory-type borrowed from an acquaintance in the science department of our local college. I found that while the thermometer from the hardware store was quite accurate, it registered temperature changes much more slowly than the laboratory thermometer. I would recommend that anyone attempting to use the hot-water treatment either borrow a laboratory thermometer from a local science teacher or determine from the science teacher where a laboratory thermometer may be purchased. Laboratory thermometers range in price from \$2 to \$3.

The second problem, that of holding water between 110° and 112° for four hours, was a bit more formidable. After considerable experimentation I arrived at a satisfactory solution. I first placed a round roaster measuring nine inches in diameter and four inches deep in my electric skillet. I happened to have a Sunbeam electric skillet 11 inches square and 1¾ inches deep, but I am sure other brands would work as well provided they were of sufficient depth. I next filled the skillet brimfull with water and filled the roaster with water to within about an inch of the top. I placed a grill in the bottom of the roaster on the assumption that the temperature on the very bottom of the roaster would be somewhat higher than elsewhere. The grill thus kept the bulbs from resting on the bottom of the roaster.

There were two reasons for placing the bulbs in the roaster rather than directly in the skillet. First, the skillet was not deep enough to prevent part of the bulbs from sticking out of the water, which I presumed to be undesirable. Second, it is easier to maintain a large quantity of water at a given temperature than a small quantity of water, and this proved to be quite important.

I found the lowest calibration of my skillet would hold the water at the desired temperature with reasonable accuracy. However, the thermostats on skillets vary somewhat, and anyone using this method should plan on at least half a day for experimentation to determine the ideal thermostat setting for their particular skillet.

Satisfied that I could control the water temperature properly, I placed as many bulbs as possible in the roaster. I kept the varieties separate by enclosing them in cheesecloth bags along with an aluminum label. I found it was sometimes necessary to place some sort of weight over the bulbs to keep them completely submerged.

I did not add formalin to the water to control basal rot as many commercial growers do, since basal rot has not been a serious problem in my garden to date. However, I will probably use formalin when soaking my bulbs this fall.

I found it advisable to check the water temperature every 15 minutes. Sometimes the water temperature would creep up slightly over 112°, but I found that by moving the thermostat a tiny fraction of an inch I could correct the water temperature in a surprisingly short time.

All the bulbs treated in this manner grew and bloomed satisfactorily. This is not to say that all of the flowers were of top quality, but since circumstances prevented me from planting these bulbs until November, this was hardly surprising. Commercial growers have told me the hotwater treatment does sometimes cause some slight distortion of blooms the first year, but this seems a small price to pay for the comforting assurance that any lurking nematodes have been thoroughly cooked.

Later, my acquaintance in the college science department volunteered the use of some of their equipment to speed up the process. First we tried large pans of water in a thermostatically controlled oven. It soon became apparent that control of the water temperature in this manner was not sufficiently accurate. We next tried two tanks with thermostatically controlled heating elements in the bottom. A grill over the elements protected the bulbs from contact with the heating unit. This equipment proved remarkably accurate, and the rest of my bulbs were cooked in one afternoon. Those of you on good terms with your local science teacher may find he has similar equipment which he will make available to you.

My "do-it-yourself" home method was not fast, but it worked! You should be able to treat at least ten to twelve bulbs at one time, depending, of course, on the size of your roaster.

All this may seem far too time consuming to be worth the effort, but lest the reader be lulled into a false sense of security in the belief that all bulbs purchased from reputable growers will be 100 percent free of nematodes, let me quote a letter from Grant Mitsch: "I would recommend, regardless of where one buys their bulbs, they be planted at least a few feet away from those grown before and known to be clean." This suggestion was made because nematodes, while they multiply rapidly, are known to move through the soil quite slowly. The small size of my own garden precluded this type of safeguard. Mr. Mitsch made this statement after conceding that the hot-water treatment, while reliable, is difficult for the amateur grower. The method I used, while admittedly slow, is not difficult and hopefully will be of assistance to my fellow daffodil enthusiasts.

EDITORS'S NOTE: To reduce the possibility of bulb injury, the hot-water treatment should be given only after the bulbs are well cured but before any root swelling has begun around the margin of the basal plate.

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The names and addresses of ADS members presented in this issue of the Journal include all additions or changes received to Aug. 10, 1965. Every effort has been made to insure accuracy, and the editors regret any errors that may appear. Please notify the Society's treasurer, who maintains the membership list, if a mistake appears in your case, and if you have not provided her with your ZIP Code number, please do so at once. For the assistance of show chairmen, Accredited Judges and Student Judges are designated AJ and SJ.

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